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MUNICIPAL
AND
OFFICIAL HANDBOOK
OF THE



CITY OF AUCKLAND
NEW ZEALAND



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ARMORIAL BEARINGS OF THE CITY OF AUCKLAND.

Description—Arms: Argent, upon Waves of the Sea a two-masted Ship in full Sail proper flagged Gules, on a chief per pale Azure and Gules to the dexter a Cornucopia Or, to the sinister a Shovel surmounted by a Pick, in saltire proper. Crest: Issuant out of a Mural Crown Or a representation of the *Phormium Tenax* flowered proper. Supporters: On either side An Apteryx (or Kiwi) proper.

MUNICIPAL AND OFFICIAL HANDBOOK

OF THE

CITY OF AUCKLAND NEW ZEALAND.

Edited by

JOHN BARR

Chief Librarian.

*Prepared by Direction of the
Auckland City Council.*

AUCKLAND, N.Z.

Wilson & Horton, Printers, Queen and Wyndham Streets.

1922.

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FOREWORD.

The civic administration of Auckland has now made 70 years of history. They have been years of wonderful expansion and progress. The facts and records call for wider and more effective publicity than any yet given to them. Resident citizens and visitors from abroad ask for information that has hitherto not been available in any convenient form. This Handbook, compiled by the Chief Librarian under the direction of the Council, is intended to meet the need so widely felt and expressed. The book will be found to cover nearly all the activities and interests of the Corporation and of other local bodies whose work is connected with the City.

The views of early Auckland placed in contrast with corresponding ones of recent date are especially impressive. They show at a glance how the pioneer town has become a modern city.

The compiler's work is ably done; and it is confidently predicted that the book will command wide interest and appreciation.

J. H. GUNSON,

Mayor.

Town Hall, Auckland, N.Z.

May, 1922.

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GENERAL DATA.

Date of foundation, City of
 Auckland 18th September, 1840

Situation :

Longitude... .. East 174° 45'
 Latitude South 36° 51'

Climate :

Mean annual temperature ... 58 degrees Fahr.
 Rainfall (average)... .. 43 inches

Areas :

City (Municipal boundaries) 7,844 acres
 Greater Auckland... .. 92.55 square miles

Population (1921 census):

City 81,712
 City and suburbs 157,757
 Province 369,618

Commerce :

Shipping, 1921—Inwards ... 1,800,193 tons
 Outwards... 1,750,844 „

Trade, 1920 :

Exports £9,383,603
 Imports £18,732,032

Harbour :

Area 73 square miles
 Water frontage 194 miles
 Berthing accommodation ... 14,925 feet

Mileage of City streets ... 184

Tramways :

Route miles 27

Parks :

Number of parks within City Boundaries...	14
Acreage of parks within City boundaries ...	522
Number of parks and reserves beyond City boundaries owned by or vested in the City Corporation	5
Acreage of parks and reserves beyond City boundaries owned by or vested in the City Corporation	7,574

Baths :

Number of swimming baths	3
---------------------------------	---

Libraries :

Number of libraries	6
Number of volumes in libraries	105,486

City Finances :

Annual revenue, 1920-21	£1,075,840
Annual ratable value, 1922-23	£1,591,526

Vital Statistics, 1921 :

Birth rate per 1,000	19.41
Death	10.50

AUCKLAND CITY COUNCIL.

The Auckland City Council is the administrative executive of the Corporation of the Mayor, Councillors and Citizens of the City of Auckland. It was originally constituted a Borough in 1851 and was governed by various Acts from that date until April 24th, 1871, when the City was constituted by a Proclamation of the Governor under the "Municipal Corporations Act, 1867." At the present time it is governed by the "Municipal Corporations Act, 1920." The Council consists of the Mayor and 21 Councillors, all of whom are elected for a period of two years by the electors of the City of Auckland. It is the body having the control of streets, water supply, drainage and sanitation, tramways, libraries, art gallery, etc., domains, parks and reserves, public baths, cemeteries, abattoir and markets.

AUCKLAND CITY COUNCIL.

MARCH, 1922.

MAYOR: J. H. GUNSON, ESQ., C.M.G., C.B.E.

COUNCILLORS: J. A. C. Allum, H. N. Bagnall, G. Baidon, M. J. Bennett, T. H. Bloodworth, F. W. Brinsden, E. H. Davis, G. Davis, J. Dempsey, J. W. Hardley, H. D. Heather, W. J. Holdsworth, Major G. R. Hutchinson, O.B.E.: G. Knight, P. M. Mackay, E. H. Maguire, E. Melville, J. B. Paterson, J. Robertson, M. J. Savage, and J. A. Warnock.

COMMITTEES:

Finance and Legal.

THE MAYOR and Councillors Allum, Bennett, H. D. Heather (*Chairman*), Melville, Robertson, Savage.

Works.

THE MAYOR and Councillors Bagnall, Baidon (*Chairman*), Bloodworth, Brinsden, Dempsey, G. Davis.

Parks.

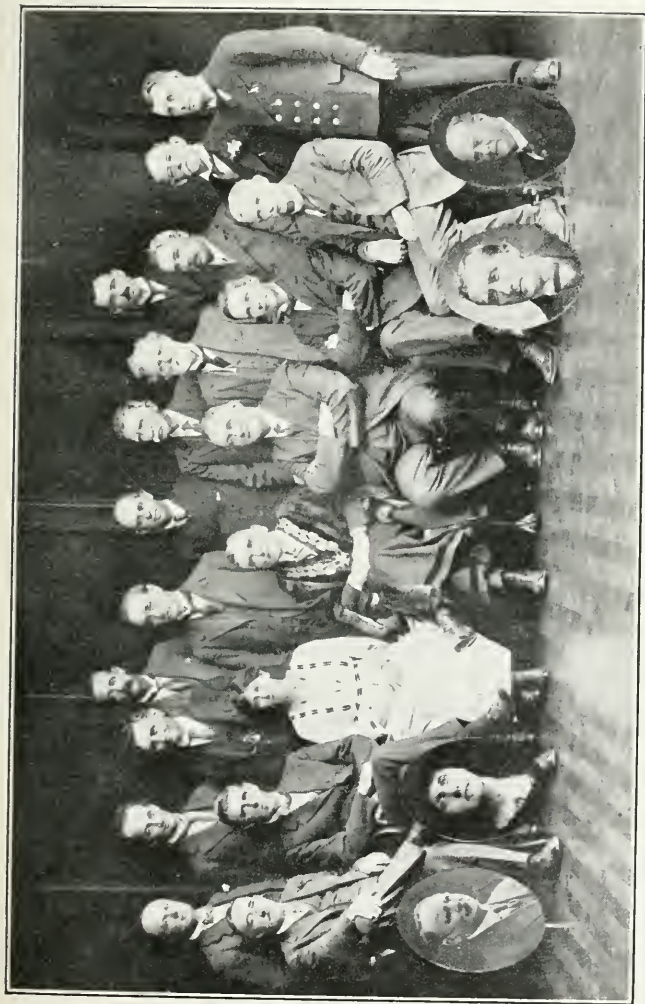
THE MAYOR and Councillors Brinsden, E. H. Davis, Knight, P. M. Mackay, Maguire, Warnock (*Chairman*).

Electricity and Tramways.

THE MAYOR and Councillors Allum, Bloodworth, Dempsey, E. H. Davis, Holdsworth (*Chairman*), Hutchinson.

Markets.

THE MAYOR and Councillors Bagnall, Hardley, Knight, Paterson (*Chairman*), Robertson, Savage.



THE CITY COUNCIL, MARCH, 1922.

STANDING: Councillors W. J. Holdsworth, T. H. Bloodworth, M. J. Savage, Geo. Davis, J. Dempsey, Ernest H. Davis, H. N. Bagnall, G. Knight, J. A. C. Allum, F. W. Brinsden, and M. J. Bennett; Orderly.

SEATED: Councillors J. W. Hardley, J. A. Warnock, E. Melville; His Worship the Mayor (J. H. Gunson, Esq. C.M.G., C.B.E.); Councillors G. Baildon, J. Robertson, J. B. Paterson.

INSET:—Councillors P. M. Mackay, E. H. Maguire, Major G. R. Hutcheson, O.B.E.; H. D. Heather, Deputy Mayor.

Stores.

THE MAYOR and Councillors Baildon, Hardley, Hutchinson (*Chairman*), Paterson, Robertson.

Library.

THE MAYOR and Councillors Bennett, E. H. Davis, H. D. Heather, Maguire, Melville (*Chairwoman*), Dr. T. W. Leys, Prof. Segar, Messrs. A. J. Entrican, J. Kenderdine, G. H. Wilson, H. Shaw.

Leys Institute.

Council representatives on Leys Institute Committee are:—

THE MAYOR and Councillors Bagnall, Bennett, Savage, and Mr. J. Trevethick.

Other Important Local Bodies whose Administrative Work is in the City are:—

Auckland Harbour Board:

Mr. H. R. Mackenzie, Chairman.

Auckland Electric Power Board:

Mr. W. J. Holdsworth, Chairman.

Auckland and Suburban Drainage Board:

His Worship the Mayor of Auckland, Chairman.

Auckland Hospital and Charitable Aid Board:

Mr. William Wallace, Chairman.

Auckland Fire Board:

Mr. J. J. Kingston, Chairman.



HEADS OF DEPARTMENTS OF THE CITY COUNCIL, MARCH, 1922.

SEATED:—J. Stanton, City Solicitor; W. St. J. Clarke, Acting General Manager, Tramways; W. F. Bush, City Engineer; J. S. Brigham, Town Clerk; J. Carlaw, Waterworks Engineer; A. Wyllie, Electrical Engineer; A. Messer, City Treasurer.

STANDING: J. H. Deighton, Manager, Fish Market; S. M. Farrelly, Stores Purchasing Department; P. E. Notley, City Valuer and Returning Officer; W. F. Rugg, Manager, Abattoirs; J. Barr, Chief Librarian; G. T. Haynes, Chief Sanitary Inspector; J. Maughan Barnett, City Organist; T. F. Pearson, Superintendent of Parks; G. R. Hogan, Chief Traffic Inspector.

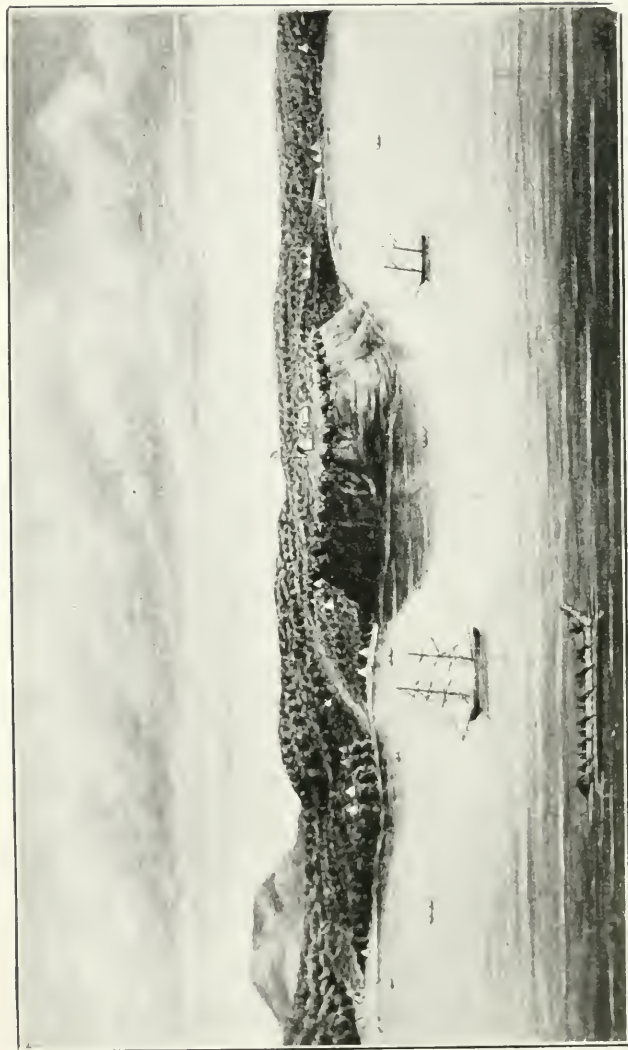
THE CITY OF AUCKLAND, N.Z.

FOUNDATION AND SETTLEMENT.

A little more than eighty years ago the site of the City of Auckland was covered with ti-tree, fern and bush. In the year 1840 Captain William Hobson, Lieutenant-Governor, selected a site on the shores of the Waitemata Harbour as the capital of the young colony, and on the 18th September of that year a flagstaff was erected on Point Britomart (since demolished) and the Union Jack unfurled. This was Auckland's official birthday. The seat of government remained here until 1865, when it was removed to Wellington. Auckland's appearance at that time was tersely described by the late Sir John Logan Campbell, one of Auckland's great pioneers. "The capital!" he wrote, "a few boats and canoes on the beach, a few tents and break-wind huts along the margin of the bay, and then—a sea of fern stretching away as far as the eye could reach."

What a transformation has taken place in this short period of little more than the normal span of a man's life. The ti-tree and the fern have given place to a city with a population (1921 census) of 81,712 inhabitants, or, if the suburbs are included, of 157,757.

The young city did not grow without experiencing difficulties. In the first two decades the Maoris caused



Mechanics' Bay.

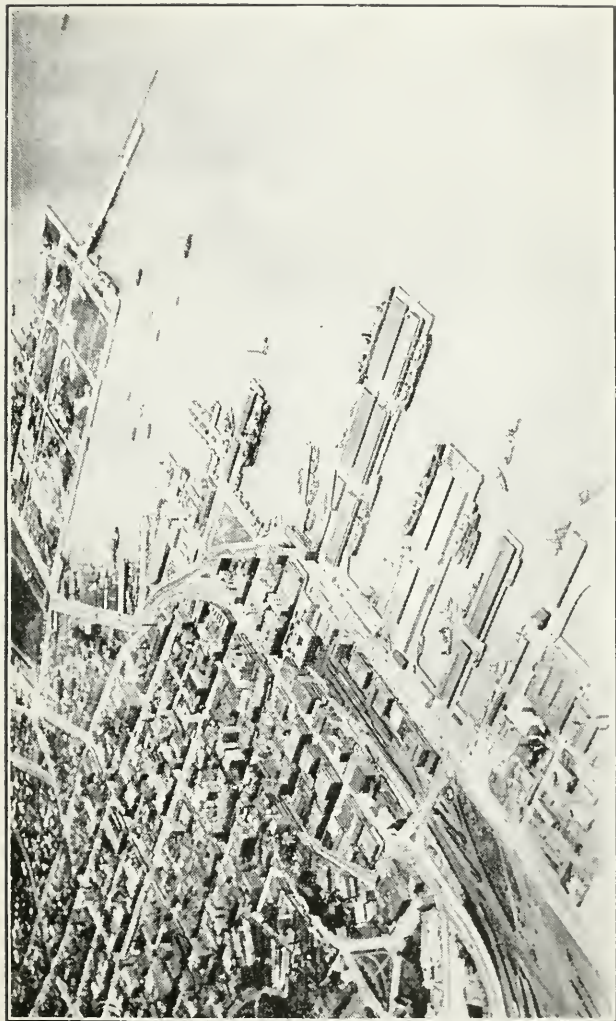
Official Bay.

Pt. Britomart.

Commercial Bay.

AUCKLAND, 1840, SHOWING THE TENTS OF FIRST SETTLERS.

All the bays have been reclaimed and the Point demolished.



VIEW OF AUCKLAND'S HARBOUR FRONTAGE TAKEN FROM A SEA-PLANE, SHOWING
THE WHARVES.

W. A. Waters, Photo.

the colonists some concern, and Hone Heke's Rebellion in the North (1843-46) and the threatened invasion of Auckland by discontented natives, in 1851, must have occasioned no little anxiety to the settlers. The most serious trouble with the natives occurred during the Maori Wars of the 'sixties, when the City was surrounded by hostile natives, and fears were entertained for its safety. Block houses were erected at various points of vantage, and the entire male population was conscripted. Fortunately the tide of war swept past the City without doing any damage to life or property and without seriously arresting the work of the pioneers, who during the first two or three decades laid the foundation of the prosperity which the City has since experienced.

GROWTH OF POPULATION.

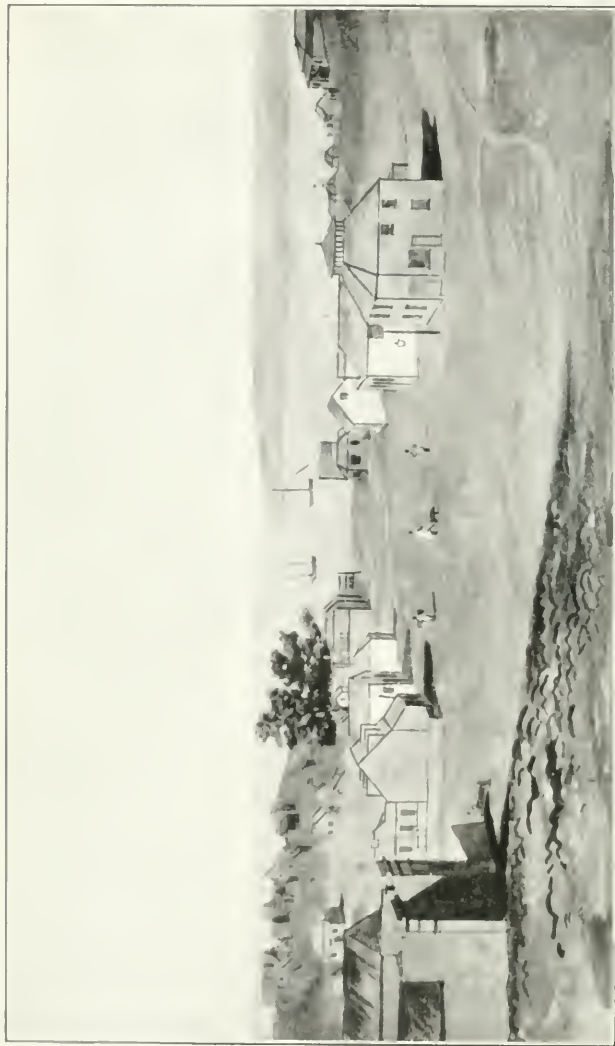
In 1841 the population was estimated to be 1,500 persons, but by 1858 it had reached 6,283, and in 1864 the inhabitants numbered 12,423. This was rapid progress for so young a city, and was due in a measure to the discovery of gold at Coromandel in 1852, which brought many colonists to the City. The war, however, seriously affected the City's prosperity, and for the next ten years the population remained practically stationary, the census returns for 1871 showing the residents to number 12,775.

The following decade found the City making rapid strides, and by 1886 the population had increased to 33,161, due in part to direct immigration, but also to the

amalgamation of adjacent districts. But the progress had been too great. The advance, which had been steady at first, led to speculation causing a boom, and resulted in a slump in the 'nineties, bringing much hardship to many. A slow recovery followed, and by 1896 the population, which had dropped to 28,613 in 1891, had increased to 31,424, and by 1900 had reached the 1886 figures. From the opening of the Twentieth Century, the progress made by the City has been marked. In 1901 the population numbered 34,213; ten years later it was 40,536, and at the last census the inhabitants of the City alone totalled 81,712, an increase in ten years of more than 100 per cent. The very large increase in the City's inhabitants in the last decade was again partly attributable to the amalgamation of contiguous districts, partly to the movement of population from other districts, and in a measure to direct immigration.

COMMERCIAL PROGRESS.

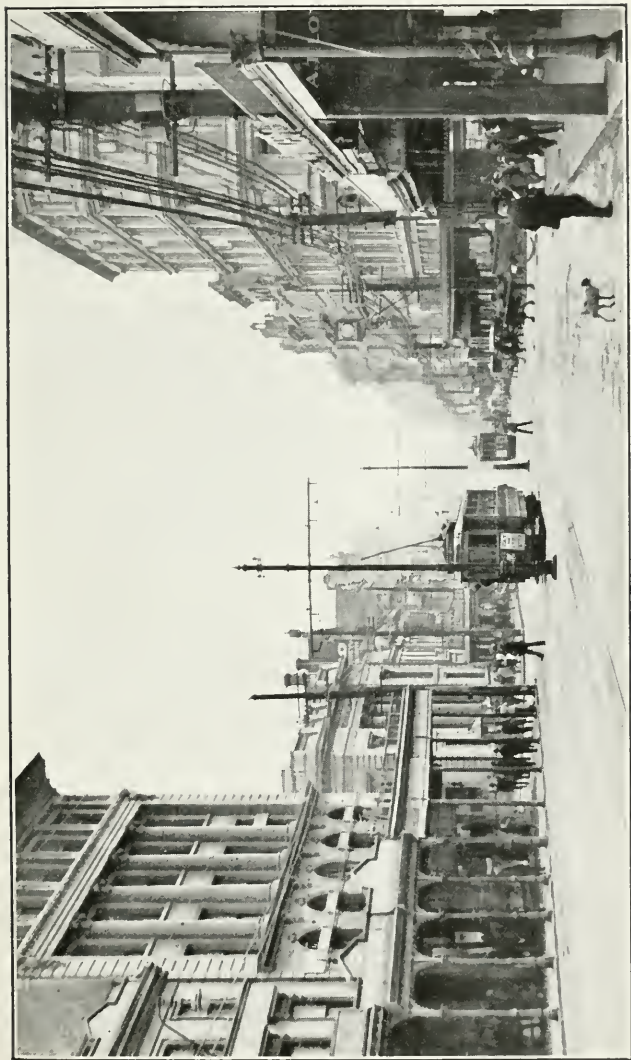
On the commercial side, the progress is also remarkable. In 1853 the exports from the Port of Auckland were valued at £148,724, and the imports £253,926. In 1861 the exports had shrunk to £57,673, while the imports had increased to £591,468. These abnormal figures were due to the wars with the Maoris. Ten years later the exports reached beyond the million mark, being £1,601,763, as against £937,655 of imports. The following figures, given in ten-year



Gaol.

QUEEN STREET IN 1843, SHOWING STOCKS IN FRONT OF GAOL.

After an original water colour in the Old Colonists' Museum.



QUEEN STREET FROM THE SAME VIEWPOINT, IN 1922.

AUCKLAND MUNICIPAL HANDBOOK.

periods, indicate the development which the commerce of the City has undergone:—

			Exports.	Imports.
1881	...	...	£813,113	£1,490,124
1891	...	...	1,218,321	1,595,036
1901	...	...	1,922,792	3,023,566
1911	...	...	3,280,878	5,650,734
1920	...	...	9,383,603	18,732,032

These figures, especially the exports, show a remarkable progress for such a young city. The excess of imports over exports is due to the fact that New Zealand is primarily an agricultural country and is dependent upon the overseas manufacturer for the supply of manufactured goods.

Auckland's commercial position is based upon its natural advantages by land and sea. It is the centre of a large agricultural district. The primary products, principally butter, cheese and wool, are shipped to the world's markets; and its port, which can accommodate the largest vessels afloat, attracts ships from all parts of the world. Its situation on the direct line of communication between the Commonwealth of Australia and the Continent of America is excellent from the mercantile standpoint.

THE PORT OF AUCKLAND.

The Port's facilities, including electric cranes for the speedy discharge of vessels and for the handling of cargoes, are thoroughly modern. A comprehensive

scheme of Port development and of concrete wharves was adopted in 1904. The scheme is being steadily developed, and will cost over £2,000,000 sterling.

As an indication of the shipping of the Port, the figures for the year 1921 are given. In that year the total number of vessels (overseas and coastal) which entered the Port was 5,367, totalling 1,800,193 tons. The outward shipping numbered 5,301 vessels, aggregating 1,750,844 tons.

The principal overseas shipping companies trading regularly to the Port are the Union S.S. Company of N.Z., the New Zealand Shipping Co., the Commonwealth and Dominion Line, the Shaw, Savill and Albion Co., the Federal and Shire Line, and the Canadian Government Line.

The coastal trade is maintained by the Northern Steamship Co., whose vessels conduct an extensive trade on both the east and west coasts of the North Island.

A TOURIST'S CENTRE.

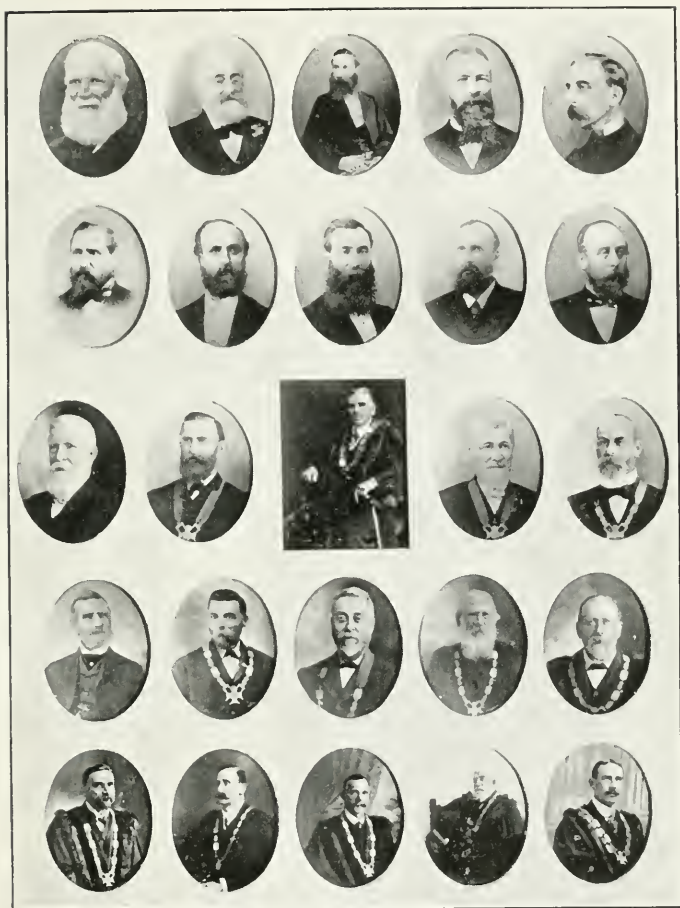
The City is also the natural centre for the increasing number of world tourists who are attracted to New Zealand by its climate and scenery, which range from the sub-tropical to the sub-antarctic. North of Auckland some of the few remaining kauri forests are to be found, and to the south are the weird and wonderful Thermal District, with Rotorua as its centre, the

beautiful scenery of the Wanganui River, the Alpine pleasures of the Tongariro National Park, and the beauties of Mt. Egmont. Connection with the South Island, where the fiords and cold lakes attract the visitor, is easily made.

MUNICIPAL DEVELOPMENT.

The municipal advancement of the City is also interesting. Auckland has the distinction of being the first Municipal Corporation established in New Zealand under the immediate sanction of the Royal Authority. The first meeting of the Council was held in November, 1851, Mr. Archibald Clark being the first Mayor. The Borough Council, as the Corporation was then called, did not last long, the disallowance in England of the "Land Fund Appropriation Act," from which the Council had expected to derive its principal revenue, causing its termination. The boundaries of the Borough were larger than the City's boundaries to-day, and covered the whole isthmus from the Waitemata to the Manukau, and from the Whau (Cox's) Creek to the Tamaki, an area of about 58,000 acres.

The City's municipal history during the remainder of the 'fifties and the 'sixties is not of much importance. "An Act to Provide for the Municipal Government of the City of Auckland" was passed by the Provincial Council in 1854, but was repealed two years later, and the powers contained therein were transferred to the Superintendent of the Province. Another attempt at



MAYORS OF THE CITY OF AUCKLAND.

FIRST ROW:—Arch. Clark (1851-52); P. A. Philips (1872-74); H. H. Isaacs (1874).
F. L. Prime (1874-75); B. Tonks (1875-76).
SECOND ROW:—W. J. Hurst (1876-77); H. Brett (1877-78); T. Peacock (1878-80);
J. M. Clark (1880-83); W. R. Waddel (1883-86).
THIRD ROW:—A. E. T. Devore (1886-89); J. H. Upton (1889-91); J. H. Gunson,
C.M.G., C.B.E. (1915—); W. Crowther (1891-93); J. J. Holland (1893-96).
FOURTH ROW:—A. Boardman (1896-97); P. Dignan (1897-98); D. Goldie
(1898-1901); Sir J. Logan Campbell (1901); Alf. Kidd (1901-03).
FIFTH ROW:—Hon. (afterwards Sir) E. Mitchelson (1903-05); Hon. A. M. Myers
(1905-09); C. D. Grey (1909-10); I. J. Bagnall (1910-11); Hon. C. J. Parr
(1911-15).

Local government was made in 1862, when the Provincial Government passed the "Town Boards Act"; it was repealed in the following year, and its place taken by the "City Boards Act," 1863. On April 24th, 1871, the City was constituted by a Proclamation of the Governor under the "Municipal Corporations Act, 1867," and it has continued to be governed by that Act and its amendments up to the present time. The first meeting of the City Council under this constitution took place on May 22nd, 1871, Mr. P. A. Philips, who had been Chairman of the City Board of Commissioners, being elected Mayor, while Mr. Frank Brodie was appointed Town Clerk.

The City of this date was small, occupying 623 acres, within the following boundaries, viz., Stanley Street, Symonds Street, Karangahape Road, and Franklin Road. From this small area it has grown by the amalgamation of adjoining districts, the Highway Districts of Ponsonby (755 acres), Karangahape (339 acres), and Grafton (88 acres), becoming part of the City in 1882. With these additions, the City continued without enlarging its area until 1913, but since that year a number of other districts have amalgamated with the City, as follows:—Parnell, 15th February, 1913 (140 acres); Arch Hill, 1st April, 1913 (154 acres); Grey Lynn, 1st July, 1914 (900 acres); Remuera, 1st March, 1915 (2,520 acres); Eden Terrace, 1st October, 1915 (190 acres); Epsom, 1st February, 1917 (860 acres); and Point Chevalier, 1st April, 1921 (1,220 acres). The City now extends over 7,844 acres.

At the present day, Auckland occupies a high position among the municipalities of the Dominion. Its civil engineering works are large, and include at the present time the erection of two dams, one designed to contain 69,000,000 gallons of water and the other 540,000,000 gallons. The smaller dam is practically finished, and the larger will be completed in 1923. The Council owns and operates an electric tramway system which covers 27 route miles. The revenue last year was £502,000. The Corporation has just sold its electricity business to the Auckland Electric Power Board, which will supply the City and district with electric energy. Gas is provided by a private company. Water, as already indicated, is under Corporation ownership. The drainage and sewerage work of the City and suburbs is thoroughly modern, and is administered by a Board, upon which the City has representation. The Fire Brigade is similarly controlled by a Board. The health and sanitation of the community is another of the Council's responsibilities. It owns a modern abattoir and a fish market, employing for the latter two steam trawlers, and the fish caught is sold at its own retail department. On the æsthetic side, the Council provides its citizens with Organ and Choral Concerts and subsidizes band performances in the public parks; the Art Gallery caters for the artistic requirements, while the Public Library satisfies the intellectual demands of the community. The public parks and reserves, both within and beyond the City's boundaries, provide for

many forms of recreation. The Council's annual revenue and the annual valuation of the City will summarize the various activities. In 1920-21 the former was £1,075,840, while the latter for the same period was £1,497,095. The progress of the City in the last twenty years may be estimated by a comparison of the figures for 1901. In that year the annual revenue was £82,657 and the annual valuation £319,765. All of the City Council's undertakings are fully dealt with in the following pages.

THE HARBOUR BOARD.

The Auckland Harbour Board, to which the administration of the Port was delegated under "The Harbour Boards Act, 1870," came into being in the same year as the City Council. These two bodies are the principal corporations of the City, and are largely responsible for the great improvements which have taken place.

SITUATION AND CLIMATE.

Auckland is situated in longitude 174° 45" E. and latitude 36° 51" S. on the Waitemata Harbour, a branch of the great Hauraki Gulf. The position is ideal alike from the commercial and sporting aspects. Its waters are deep enough for the largest ships afloat. When the great battle cruiser *Renown*, of 28,000 tons, visited Auckland, in 1920, with the Prince of Wales on board, she was able to come right alongside the



PHOTOGRAPH OF AUCKLAND TAKEN FROM A SEA-PLANE, SHOWING
WAITEMATA IN THE FRONT AND THE CITY IN THE BACKGROUND



THE CITY'S POSITION BETWEEN THE TWO HARBOURS, THE
MANUKAU IN THE BACKGROUND.

W. A. Waters, Photo

City's main street and to be moored at the wharf there. On its waters the smallest and lightest craft may cruise among the myriad islands or explore the smaller gulfs and bays which abound. The waters of the gulf attract both yachtsmen and fishermen, for scenery and sport are to be found in abundance. Auckland's beaches, which are easily accessible, are famed for their safety, and to the jaded city dweller they are a source of physical refreshment and enjoyment. In the summer time they are the pleasure grounds of thousands.

Nature has dealt bountifully with Auckland. Sunshine and rain she has given with equal generosity. The mean annual temperature is about 58° ; the coldest month (July) has an average of 51° , and the hottest month (December) an average of 65° . The average rainfall is about 43 inches. Frosts are rare, and a serious drought practically unknown.

The City itself is beautifully situated between the Waitemata and the Manukau Harbours. Leaving Auckland City by electric tram, one may travel across the narrow isthmus to the Borough of Onehunga, on the Manukau Harbour, in less than forty-five minutes, the distance being about seven miles. At the narrowest point the distance is less than a mile. For many years proposals that these two harbours should be connected by a canal have been discussed; such a canal would add enormously to the City's commercial facilities. The Northern Boroughs,

which are growing rapidly, will no doubt, in due time, be brought nearer to the City by means of a bridge across the Harbour.

Between these two harbours Auckland City stands, its northern and eastern boundaries mingling with the waters of the Waitemata. To the south and west its frontiers push across the isthmus. Salient features of the City's topography are the ridges and gullies which dissect it, and the many stretches of undulating land between. Another striking feature of the locality is the large number of hills, which are locally known as mounts, although the largest of them does not exceed 650 feet in height. They are, almost without exception, of volcanic origin, for many generations extinct. From sea level these mounts and ridges lend a pleasing and varied feature to the scene, and from their summit exceptionally beautiful views of land and sea can be obtained. Travellers of world-wide experience have expressed their pleasure and surprise at the views obtained from Maungawhau (Mt. Eden) and Maungakiekie (One Tree Hill). It is a pleasure to state that nearly all these vantage points have been reserved as domains and will belong for ever to the people.

The City is pleasingly laid out, although it might not call forth the encomiums of a modern expert in town planning. The early colonists seem to have followed the natural method of laying down streets, following the easiest routes. The main streets are

broad and well made, but some of the older streets in the heart of the City are narrow. This was an error in the original plan which is only being overcome at great expense. For many years Auckland roads were not good. Concrete paving is now being used, however, and a vigorous roading policy having been adopted, the City is making rapid progress in roading improvements, and will soon have the reputation of being the best roaded city in Australasia.

BUILDINGS.

Auckland's buildings are a quaint mixture of past and present. In the main streets large buildings of modern design stand side by side with one, two, or three storey structures which have passed their prime in terms of years. This contrast is not to be deplored from an artistic point of view, for what it lacks in symmetry is more than compensated by the effect of a broken sky-line. The sky-scraper happily does not exist—an eight-storey building being the tallest in the City. Amongst notable buildings may be mentioned the Post Office, Ferry Buildings, the New Zealand Insurance Buildings, some of the banks, including the Auckland Savings Bank and the Bank of New Zealand, which is the gem of Auckland's commercial buildings, the Public Library and Art Gallery, the Town Hall, the Supreme Court, the Magistrate's Court and the city churches, noticeably St. Paul's, St. Matthew's, St. Andrew's and the Tabernacle.

A GARDEN CITY.

If Auckland cannot be described as an ideal example of city planning, according to the town planner's standards, it can fairly be described as a garden city. One cannot walk any distance in the City—except, of course, the purely business part—without finding a garden. The public parks and reserves, which are fully described in the succeeding pages, are tastefully laid out, and every house, be it large or small, has a garden or trim lawn. In a climate where extremes do not exist, with a good average rainfall and abundant sunshine all the year round, the cultivation of flowers, fruit and vegetables is an easy matter, and the universal garden is the result.

The domestic architecture of Auckland and suburbs helps to accentuate this feature. Tenements are practically unknown. The type of building used for dwellings is either the cottage or the bungalow, and occasionally a more formal house of two storeys. Nearly every household is self-contained, or at worst occupies a semi-detached dwelling. Seldom are two houses together of the same design. The rows of dwellings of a uniform pattern, so common in English towns, do not obtain here, and this adds to the variety and charm of the Auckland home.

EDUCATION.

The educational interests of the City are represented by the University College (which is about to commence

the erection of a large modern building), the Grammar Schools for boys and girls, and a number of private secondary schools, the Seddon Memorial Technical School, and the State primary schools. Of the latter there are eighteen within the City boundaries alone. There is also a School of Art, and, attached to the University, a school of music. The Auckland Museum is another educative institution, notable especially on account of its Maori collection, which is reputed to be the largest and best in existence.

BUSINESS.

The business activity of the City is exemplified in the large banking concerns carried on in it, which now number six different companies, including the progressive, locally promoted Bank of New Zealand. This bank has now branches throughout New Zealand, the Commonwealth of Australia, Fiji and Samoa. There are also a number of insurance companies, including two large companies of native origin, viz., the New Zealand Coy. and the South British Coy. Both have made good their positions among similar concerns throughout the world.

AMUSEMENTS.

The amusements which the City affords are limited naturally by the numbers of the population. A city of Auckland's size cannot expect to be catered for to the same extent as London. Yet, despite this limitation, the City has been fortunate in receiving visits from

world renowned artistes. Generally speaking, however, the City has to depend for its entertainments upon the talent contained within the Dominion and periodical visits by Australian companies. This dependence upon its own resources has led to the development of the local musical and dramatic talent, and has resulted in the fostering of a number of organisations which provide entertainment of a good standard. Entertainments of a more solid character than those already indicated are provided by courses of lectures arranged by the Auckland Institute, the Leys Institute and other libraries and organisations.

SPORTS.

In the sporting world the City is fortunate. The genial climate and the natural facilities for outdoor sports richly endow Auckland. At football the Dominion has proved its prowess against all comers. Both the Rugby and the League codes have large followings; Association is also played; and hockey is popular. The "sport of kings" has a democratic following. The Auckland Racing Club's course at Ellerslie will stand comparison with any course in the world, and its extensive grounds are most exquisitely laid out in lawns and gardens. Yachting and aquatic sportsmen have one of the finest waterways in the world to exercise on, and the Hauraki Gulf attracts thousands of devotees. Throughout the season regular races are held, and the annual regatta, which takes place on Anniversary Day (January 29th), is one of the sporting events of the

year. Cricket, lawn tennis and bowls attract many, and golf is rapidly coming into favour. Athletic sports also claim a number of adherents.

A FORTUNATE CITY.

Auckland has been fortunate in many ways, but especially in respect of its benefactors. To the visitor, the number of endowments which the City manifests is a source of constant remark and not a little justifiable envy. Beginning in the 'eighties with the gift of Sir George Grey to the citizens of his collection of valuable books, pictures and curios, the Roll of Benefactors has increased, until to-day it is one that any city would be proud to possess. A list of the most important benefactions is included in an appendix.

This brief survey of the City's foundation and progress is intended to serve as a background to the more fully detailed sections which follow. Other information of a general and statistical character will be found in the appendices.

JOHN BARR,
Chief Librarian.



THE TOWN HALL, WITH THE SIR GEORGE GREY STATUE.

TOWN HALL.

Although Auckland's municipal history goes back to 1851, eleven years after the foundation of the city itself, it was not until sixty years later that the first building devoted entirely to the purposes of a town hall was opened. Prior to the Proclamation of April 24, 1871, by which the Auckland City Council was constituted under "The Municipal Corporations Act, 1867," local government was a thing of little importance, but from 1871 onwards the municipality began to make headway. At the commencement of this period, only a small office, owned by Messrs. Upton & Co., Booksellers, Queen Street, and located over their shop, was occupied as the first municipal chambers of Auckland. As the Council's affairs prospered, this humble office was found inadequate, and larger accommodation was sought in the old Magistrate's Court, at the corner of High and Chancery Streets. Soon after the opening of the Public Library in the new building, Wellesley Street, in 1887, the Council decided to utilize, temporarily, some of the rooms in this building as Municipal Chambers—that which had been planned for a lecture hall becoming the Council Chamber, and rooms designed for more æsthetic purposes being converted into departmental offices. For nearly a quarter of a century (until the Town Hall was ready for occupation) the Corporation carried on its work here.

The first practical step in connection with the provision of a Town Hall for Auckland goes back to

1880, in which year the question of a site received the consideration of the City Council, and it was then resolved to seek legislative authority to occupy the reserve at the junction of Grey and Queen Streets for the erection of a Town Hall.

This was carried into effect, and by "The Auckland Reserves Exchange and Change of Trust Act, 1881," Clause 5, the Council was authorised to erect a Town Hall and such other buildings for municipal purposes as to the Council should seem fit upon such reserve, being Lot 57, Section 29, City of Auckland, containing 30 poles, which previously, by "The Auckland City Endowments and Reserves Act, 1875," had been vested in fee simple in the Mayor, Councillors, and Citizens of the City of Auckland and their successors as an endowment for the improvement of the City of Auckland.

The area of the reserve was manifestly too small for the purpose, and, as an addition thereto, the Council purchased, in 1883, Mr. Lally's property in Grey Street for £1,350, and Mr. S. Jagger's property fronting Queen Street, on which was erected the Army and Navy Hotel, for £3,800.

In 1901 proposals were submitted by the Council to the ratepayers to erect a Town Hall at a cost of £26,000, and to purchase two areas of land between Coburg and Lorne Streets, known as Philson's Square and Graham's property, containing about one acre, at the price of £14,000. Although these proposals were not officially connected, still, in the minds of the rate-

payers, they formed one joint proposal, and they were rejected at the poll.

In 1905 the Council resolved that the time had arrived for providing a Town Hall for the City of Auckland, and that such Hall be erected on the site already acquired for the purpose at the corner of Queen and Grey Streets, subject to the Council being enabled to acquire the additional land necessary, and being satisfied that no architectural difficulties existed to prevent the erection of a suitable building.

Negotiations were entered into for the purchase of the necessary additional land, resulting in the acquisition of Lots 2 to 7, 9 to 13, of Allotments 1, 2 and 3, of Section 29, of the City of Auckland, at the price of £13,201.

This additional land having been acquired, competitive designs were invited for the Town Hall, the premiums offered being:—

1st	...	...	£400
2nd	...	...	£200
3rd	..	...	£100

Forty-six sets of designs were submitted, and these were placed by the Council before a special Board of Experts, consisting of Messrs. W. E. Bush, A.M.I.C.E., City Engineer; H. C. Kent, F.R.I.B.A., of Melbourne; P. Oakden, F.R.V.I.A., of Melbourne; T. Mahoney and R. M. Watt, Architects, of Auckland.

These gentlemen, after spending seven or eight days in exhaustively studying the designs, recommended the

Council to select as the three best those submitted by

1. Messrs. J. J. & E. J. Clark, Architects, of Melbourne
2. Messrs. W. & H. Black, Architects, of Camberwell, Melbourne.
3. Messrs. Clegg & Miller, Architects, of Ballarat, Victoria.

Tenders were called as soon as possible thereafter, and in August, 1908, the tender of Messrs. Ferguson & Malcolm, at the price of £87,565 19s was accepted, subject to such modifications thereof as might be mutually agreed upon between the Council and the contractors.

Subsequent modifications and improvements, including the substitution of a stone front for stucco work, the purchase of additional land and the furnishing, together with the charges incidental to the raising of loans, brought up the cost of the building to approximately £125,000.

The foundation stone was laid by His Worship the Mayor (Mr.—afterwards the Hon.—Arthur M. Myers) on the 24th February, 1909, and the building was opened by the Governor, Baron Islington, on 14th December, 1911, Mr. (afterwards the Hon.) C. J. Parr, C.M.G., Mayor, presiding at the ceremony which took place in the Large Hall. The festivities connected with the opening continued for a week, concerts, organ recitals, oratorios, and the Annual Reunion of the Old Colonists' Association being held in the new Hall.



COUNCIL
Flashlight Photograph, taken



CHAMBER.
while Council was in session.

At the opening ceremony the Mayor formally acknowledged two splendid gifts which had been made to the citizens and erected in the Town Hall. The first was the pipe organ, the gift of Mr. Henry Brett, a former Mayor of the City: the other was the clock, presented by Mr. A. M. Myers, who had just retired from the Mayoralty.

The architectural style of the building is a free treatment of the Classic, and the material used for the facades is Oamaru limestone with a base in Melbourne bluestone. For the main Queen and Grey Street fronts a columnar method of design has been adopted, terminating at the apex formed by the junction of the two streets in a segmental colonnade, surmounted by a tower 18 feet square and 130 feet high, in which is fixed the clock with four dials of $8\frac{1}{2}$ feet diameter, presented by Mr. A. M. Myers. In front of this colonnade is a terrace enclosed by a stone balustrade, with provision for a statue at the extreme angle. A feature of the structure of the building is the arrangement of the foundations, which necessitated special treatment on account of the depth at which rock was found. Concrete piers have been carried down at intervals to the rock and the spaces between spanned by concrete beams carrying the walls, the beams being reinforced with Kahn steel bars.

The principal entrance is from Queen Street, and the building is divided into two portions, the first being a four-storey building containing the Municipal Offices, and the other containing the Large Hall, Concert Chamber, and Supper Room.

These portions are separated from each other by the main entrance hall, giving access to the Large Hall, Concert Chamber, Supper Room, etc. The main entrance to the Large Hall and Concert Chamber is in Queen Street.

From the entrance hall a staircase, 12 feet wide, leads down to the ground floor of the Large Hall and to the Supper Room, which are on the basement of Grey Street level.

The principal office entrance is also situated on Queen Street, immediately under the tower, and leads by a short staircase to the ground floor of the office block. There is also a commodious entrance on Grey Street with a courtyard entrance adjoining, and there are separate entrances to the dressing rooms for both the Large Hall and Concert Chamber.

The office portion of the building provides the following accommodation:—On the basement floor, offices for the City Valuer and Registrar of Electors, Traffic Inspector, Stores Purchasing Department, Strong and Store Rooms, and commodious cloak-rooms for gentlemen.

On the ground floor is the Council Chamber. This is a handsome room, semi-circular in plan, 47 feet by 42 feet, and is panelled in kauri, with plaster walls and ceilings and lead glazed windows. The Mayor and Town Clerk's tables are fixed on a raised dais, which occupies a recess in the chamber. The Councillors' desks are arranged in a semi-circle, and tables are provided for other officials and for the Press, while a



MAYOR'S ROOM.



MAYORESS'S ROOM.

small gallery for the accommodation of the public, with separate entrance, is also provided. The Chamber is approached by doors leading from the Mayor's suite and the Councillors' suite respectively.

The Mayor's suite consists of Waiting Room, Public Office, and Private Room, and separate lavatory accommodation.

The Town Clerk's Private Office adjoins the Waiting Room, with his general office adjacent.

On the Grey Street side a suite of rooms for Councillors is provided, consisting of Councillors' Room, Committee Room, Library, and Cloak Room. A kitchen adjoins the Councillors' Room.

On the first floor are situated offices for the City Engineer, Waterworks Engineer, and Chief Sanitary Inspector.

The second floor is occupied by the City Treasurer's Department and the Auckland City Sinking Fund Commissioners. On this floor also are provided Caretaker's quarters.

On each floor there is ample lavatory accommodation for the staff.

The main feature of the hall portion of the building is, of course, the Large Hall, which has an average length of 168 feet by a width of 75 feet, and an actual floor area for dancing of 122 feet by 75 feet, the height from floor to ceiling being 50 feet. Ample space has been provided for the fine organ, and in front thereof is placed a chorus gallery and orchestral plat-



RECEPTION OF H.R.H. THE PRINCE OF V



ES AT THE TOWN HALL. APRIL 24th, 1920.

form capable of accommodating 350 performers. The ground floor is capable of seating 1,660 persons, exclusive of the chorus gallery and platform, while a further 740 can be accommodated in the capacious balcony, situated on two sides and at the end of the Large Hall, and an additional 300 can be provided for in the upper gallery, giving a total seating capacity of 2,700, exclusive of performers.

The orchestral platform is so arranged that it can be run back on the occasion of dances or big public meetings, when an extra large floor area is required.

Dressing-room and lavatory accommodation is provided at the rear of the Large Hall for the use of artistes and performers, and underneath the organ loft there is a commodious Green Room, and ample Cloak-rooms and lavatories for ladies and gentlemen. Ticket offices are provided for both halls.

The Concert Chamber is, overall, 93 feet long by 47 feet wide and 31 feet high, and is capable of seating 880 persons. It has a stage platform and ample dressing-rooms. Communication with the Large Hall is obtained by a bridge across the triangular light area between the two halls.

Both halls are amply provided with exits, the doors of which are fitted with patent panic bolts.

Underneath the Concert Chamber is the Supper Room, which communicates directly by two bridges with the Large Hall, and in connection therewith there is a kitchen and large servery, approached by a separate staircase from Queen Street.

A large chair store has been made under the Large Hall, and chair lift and hatchway provided.

Both the Large Hall and Concert Chamber are exceedingly handsome auditoriums, the decorations being carried out in Carrara plaster work of chaste design, while the windows are stained lead lights.

The three public staircases are constructed of reinforced concrete, finished in granolithic, the landings being finished with tiled floors and dadoes, a similar treatment being adopted for all lavatories. The balusters are of ornamental cast-iron, with cedar handrail.

The whole of the walls are rendered in cement and finished with Keene's, while all ceilings are plastered with finish.

Lead lights have been used in the Large Hall, Concert Chamber, Entrance Hall, and Colonnade, at apex, with good effect.

New Zealand kauri and Australian jarrah are the principal timbers employed, the Large Hall roof trusses, balcony and gallery cantilevers and principal floor girders being of steel.

All walls other than the stone facings are of brick or cement concrete, and slate and galvanised iron are used for roofing. Internal partitions are of timber studding, lathed with steel and plastered.

The whole of the building is lighted and heated by electricity, the electroliers being of handsome design, and an electric passenger lift has also been installed, giving access to every floor.

Fire hydrants have been provided, and exhaust mains for a stationary vacuum cleaning plant fixed over the whole building.

The Town Hall, being the most commodious hall in the city, is used for all the large gatherings, both public and private, of the city. All the important civic receptions take place here also; it was in this Hall that H.R.H. the Prince of Wales was officially welcomed by the Mayor, councillors and citizens on his arrival in Auckland on April 24th, 1920.

The City's progress in the decennial period since the opening of the Town Hall has been so great that already the accommodation provided for the municipal staff is inadequate, a number of departments being housed in offices outside the Town Hall. The Council has under consideration proposals for the erection of Municipal Chambers on the old Markets site, in order that the Corporation's Staff may be congregated in one building.

J. S. BRIGHAM,
Town Clerk.

Schedule of charges for hire of Town Hall, Concert Chamber and Organ.

	Concert Chamber.			Large Hall.		
	£	s.	d.	£	s.	d.
1. Daylight, 10 a.m. to 4 p.m. . .	1	10	0	4	0	0
2. Daylight, 2 p.m. to 4.30 p.m. . .	3	0	0	8	8	0
3. Matinee for Celebrities . .	4	4	0	10	10	0
4. Evening (Electric Light included), Mondays to Fridays (and Public Holidays when trains not run- ning), 7.30 p.m. to 11 p.m. . .	5	0	0	18	0	0
5. Saturdays, 7.30 to 11 p.m. . .	5	10	0	21	0	0
6. Public Holidays, 7.30 to 11 p.m. when trains running . .	6	6	0	23	0	0
7. Rehearsals (evening) in connection with engagements only, subject to Hall not being otherwise re- quired. Partial lighting 3½ hours	1	10	0	5	0	0
8. Daylight Rehearsals (morning or afternoon)	1	0	0	2	0	0
9. When no charge for admission made, nor collection taken up (including Sundays), evening . .	3	3	0	10	10	0
10. When no charge for admission made, but collection taken up (including Sundays), evening . .	3	3	0	12	12	0
11. Receptions, At Homes, by day- light, no admission charge, no electric lighting	3	0	0	8	8	0
If electric light required (extra)	0	10	6	1	1	0
12. Local Artistes and Musical Societies (only) allowed 15 per cent. re- duction from above charges.						

SPECIAL PROVISIONS.

- | | | | |
|-----|---|--------|---------|
| 13. | Strictly Charity Concerts. All per-
sonal services being without fee,
and whole proceeds, if any,
being devoted to Charitable
object, 7.30 p.m. to 11 p.m. . . | 3 3 0 | 10 10 0 |
| | When personal services are paid
for, and balance of proceeds
devoted to Charity | 3 3 0 | 12 12 0 |
| 14. | Bazaars, Exhibitions, Flower
Shows, or other similar en-
gagements, necessitating the use
of the Town Hall during the
whole day and evening, until
not later than 11 p.m., includ-
ing 4 hours lighting | 5 10 0 | 15 0 0 |
- Hall must be vacated not later
than noon the day following
the closing of engagement, or
half usual charge additional paid.

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	Concert Chamber.	Large Hall.
	£ s. d.	£ s. d.
15. Use of kitchen and store rooms (own fuel to be provided) ..		1 0 0
Deposit (to be returned after cleaning kitchen not later than noon on day after use) ..		2 0 0

BALLS.

16. From 7.30 p.m. till midnight ..	5 0 0	19 0 0
17. From 7.30 p.m. till midnight (in- cluding use of supper room and kitchen)	7 0 0	21 0 0
18. From 7.30 p.m. to 3 a.m. ..	6 0 0	20 0 0
19. From 7.30 p.m. to 3 a.m. (includ- ing use of supper room and kitchen)	8 0 0	22 0 0
20. When Balls are in aid of Local Charities, 15 per cent. reduction. When the Small Hall is engaged as a Supper Room or Refresh- ment Room, in connection with the use of the Large Hall for Balls, one-third of the above rates for the Small Hall to be paid for same.		

USE OF ORGAN.

21. For accompaniments only, by approved Organists ..	2 10 0
22. For accompaniments only, by ap- proved Organists, for Charitable purposes	1 10 0
23. For Public Recitals	3 10 0
24. For Public Recitals for Charitable purposes	2 10 0
25. Practice (approved Organists only) by daylight, per hour ..	0 5 0
26. Practice in evening, Hall not otherwise engaged, two small lights allowed, per hour ..	0 7 6

THE ORGAN.

The fine Organ in the Town Hall was presented to the City by Henry Brett, Esq., who was Mayor of Auckland in 1877-78, and who for many years past has taken a keen interest in the musical welfare of the community. The specification of the organ was drawn up by Mr. Edwin Lemare, the noted English organist, and the instrument was built by Messrs. Norman and Beard, of Norwich and London. It was erected in the Town Hall under the supervision of Mr. H. A. Tustin, the New Zealand manager of the builders, and was opened on December 14, 1911, by Mr. Maughan Barnett, at that time City Organist at Wellington. In 1914 a set of carillons, also the gift of Mr. Henry Brett, was added to the Organ.

The Organ is the largest in New Zealand, and the most modern in Australasia. It is situated at the level of the uppermost tier of the choir platform, and is set in a special chamber, 48ft. by 22ft., provided for its reception.

Specification.

PEDAL ORGAN. Compass CCG to G, 32 Notes.

1	Double Open Diapason	..	..	32ft.	
2	Double Open Diapason	..	..	32ft.	
3	Open Diapason	..	..	16ft.	Wood
4	Open Diapason	..	..	16ft.	Metal
5	Violone	..	..	16ft.	Wood
6	Bourdon	..	..	16ft.	Wood
7	Leho Bass	..	..	16ft.	Wood
8	Octave Diapason	..	..	8ft.	Wood
9	Principal	..	..	8ft.	Metal
10	Bass Flute	..	..	8ft.	Wood
11	Contra Posaune	32ft.	Metal
12	Trombone	16ft.	Metal
13	Trumpet	8ft.	Metal

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CHOIR ORGAN (Compass CC to C, 61 Pipes).

14	Lieblich Gedeckt	8ft., Wood and Metal
15	Echo Dulciana	..	..	8ft., Metal
16	Dolce	..	..	8ft., Wood and Metal
17	Viol d'Orchestre	..	..	8ft., Metal
18	Voix Celeste (2 ranks)	..	..	8ft., Metal
19	Unda Maris	..	..	8ft., Metal
20	Flauto Traverso	..	..	4ft., Wood
21	Harmonic Piccolo	..	..	2ft., Wood
22	Schalmei	..	..	16ft., Metal
23	Orchestral Clarinet	..	..	8ft., Metal
24	Orchestral Oboe	..	..	8ft., Metal
	Tremulant			

GREAT ORGAN (Compass CC to C, 61 Notes).

25	Double Open Diapason	..	..	16ft., Metal
26	Open Diapason (large)	..	..	8ft., Metal
27	Open Diapason (medium)	..	..	8ft., Metal
28	Open Diapason (small)	..	..	8ft., Metal
29	Claribel Flute (wood)	..	..	8ft., Wood
30	Corno Flute (metal)	..	..	8ft., Metal
31	Principal	..	..	4ft., Metal
32	Harmonic Flute	..	..	4ft., Metal
33	Twelfth	..	..	2½ft., Metal
34	Fifteenth	..	..	2ft., Metal
35	Mixture	..	..	4 ranks Metal
36	Trombone	..	..	16ft., Metal
37	Tromba	..	..	8ft., Metal
38	Harmonic Clarion	..	..	4ft., Metal

SWELL ORGAN (Compass CC to C, 61 Notes).

39	Bourdon	..	..	16ft., Wood
40	Diaphonic Diapason	..	..	8ft., Metal and Wood
41	Geigen Principal	..	..	8ft., Metal
42	Lieblich Gedeckt	..	..	8ft., Wood and Metal
43	Salicional	..	..	8ft., Metal
44	Vox Angelica	..	..	8ft., Metal
45	Principal	..	..	4ft., Metal
46	Lieblich Flute	..	..	4ft., Metal
47	Fifteenth	..	..	2ft., Metal
48	Mixture (3 ranks)	..	..	Metal
49	Contra Posaune	..	..	16ft., Metal
50	Horn	..	..	8ft., Metal
51	Oboe	..	..	8ft., Metal
52	Vox Humana	..	..	8ft., Metal
53	Harmonic Posaune	..	..	4ft., Metal
	Tremulant.			

SOLO ORGAN (Compass CC to C, 61 Notes).

54	Harmonic Claribel	..	..	8ft., Wood and Metal
55	Concert Flute	..	..	4ft., Metal
56	Orchestral Trumpet	..	..	8ft., Metal
57	Bombarde	..	..	16ft., Metal
58	Tuba Mirabilis	..	..	8ft., Metal
59	Tuba Clarion	..	..	4ft., Metal
	Tremulant.			
60	Carillons.			

AUCKLAND MUNICIPAL HANDBOOK.

COPPLERS.

swell Octave	solo to Great
swell Sub Octave	Solo to Choir
swell Unison Off	solo Octave
swell to Great	Choir to Pedal
swell to Choir	Great to Pedal
choir Octave	swell to Pedal
choir Sub Octave	solo to Pedal
choir Unison Off	Great Pistons to Pedal Composi-
choir to Great	tion

ORGAN RECITALS.

The installation of the Organ in the Town Hall was followed in due course by the appointment of a City Organist. Mr. Maughan Barnett, to whom the position was offered, gave the first of the regular Saturday evening Recitals on April 5th, 1913.

The scope of the recital scheme has been gradually enlarged by the City Council.

A series of free afternoon Recitals for school children was established towards the end of 1913, and, later on, an Essay scheme was connected with these Recitals. Prizes for the best papers are given by Messrs. Henry Brett and S. Adams.

In 1917 it was decided to engage vocalists for the Recitals, and in 1920 a Municipal Choir was formed.

The attendance at the Saturday evening Recitals has steadily increased year after year. The average attendance is now more than double that of the first year. The audience at the Recitals for school children frequently numbers over 2000.

The Saturday evening Recitals commence in April and continue till the end of November. A Carol Concert

is given in December and a special recital is arranged for Christmas night.

A charge of sixpence is made for admission to the evening Recitals, but a short series of free afternoon Recitals is given during the winter months. The Organ is also used at all civic functions which take place in the large Town Hall.

Three hundred and thirty-one public recitals have been given by the City Organist up to the end of 1921, at which 600 different compositions have been played.

MUNICIPAL CHOIR.

The Municipal Choir, the first to be established in New Zealand, gave its first public performance on June 19th, 1920. The Choir consists of about 90 voices, and specialises in unaccompanied choral music. Its repertoire includes early English madrigals, motets for double chorus by Mendelssohn, and a number of works by modern British composers.

The Choir appears at eight or nine of the Saturday evening Recitals each year, and takes a part in the programmes arranged for important civic functions. The Choir is under the direction of the City Organist.

MUSIC IN THE PARKS.

Band performances are given in the various parks on Sundays during six months of the year, from November onwards. The local bands selected for this purpose receive a grant from the City Council.

J. MAUGHAN BARNETT,

City Organist.



AUCKLAND PUBLIC LIBRARY, 1880.

Formerly the Mechanics' Institute and Library, established 1842.



PUBLIC LIBRARY, ART GALLERY, AND OLD COLONISTS' MUSEUM, TO-DAY.

The progress illustrated in these pictures may be taken as typical of the growth of the City's institutions in general.

PUBLIC LIBRARY, ART GALLERY AND OLD COLONISTS' MUSEUM.

PUBLIC LIBRARY.

The Auckland Public Library was founded in 1880, commencing its career in the Mechanics' Institute. This Institute, which was established in 1842, had filled an important function during the thirty-eight years of its existence, supplying literary recreation for its members, lectures and classes of instruction for the community, when such were not easily obtained, and providing a hall for meetings when no other existed in the City. In it many of the flourishing societies of to-day were born.

Toward the end of the 'seventies the Institute fell upon evil days, and the City Council acquired the premises, which were situated in Chancery Street (now Court House Lane), along with the stock and freehold, and re-named it the Free Public Library. At the same time the Council acquired the library of the Auckland Provincial Council, which contained a well-selected stock, including a valuable set of official papers relating to New Zealand. At the opening of the Public Library the stock numbered about 6,000 volumes.

The premises of the Mechanics' Institute, which were then some thirty-eight years old, were not in good condition, and they were also inadequate for the purposes of an up-to-date library. Two years after the

establishment of the Library, Sir George Grey offered to present his collection of books, pictures and curios to the City, and this generous action influenced the City Council in its decision to erect a building which would suitably house this and other collections.

In 1883 the site of the new building was selected, and designs invited for a Public Library and Art Gallery building, and the plans of Messrs. Grainger and D'Ebro, architects, of Melbourne, having been accepted, the foundation stone was laid, on 4th June, 1885, by the Mayor (Mr. William Richard Waddel) with much pomp and circumstance, addresses being delivered by Sir George Grey, Sir George Maurice O'Rorke and Sir Frederick Whitaker. The contract for the building was let to Messrs. Malcolm & Price for £21,851.

The official opening of the Library took place on 26th March, 1887, and was again the occasion of an interesting ceremony, in which the citizens took an active interest. The Mayor (Mr. A. E. T. Devore) presided over the gathering which filled the building, and he was supported by representative citizens, including Sir George Grey, who occupied the seat of honour. Addresses were delivered by the Mayor, by Sir George Grey, Sir G. Maurice O'Rorke, and ex-Mayors Peacock, Clark and Waddel, while vocal selections were rendered by the Choral Society.

At the date of the opening of the new building, the stock comprised 15,000 volumes, the increase being mainly attributable to the acquisition of Sir George

Grey's library. From 1887 to 1898 Sir George continued to add to his collection, enriching it with such treasures that the Auckland Public Library has attained what is perhaps a unique position among municipal libraries throughout the world. The manuscripts in the collection represent specimens of illumination of various schools and books written in Greek, Latin, Coptic, Arabic, Ethiopic and Persian, Italian, French, German, English and Bohemian, and the languages of the Polynesians, including Maori, and of the Aborigines of Australia. Worthy of special mention are: *Lectionarium Græcum* (Lessons from the Gospels), a Greek MS. of the 10th or 11th Century (the oldest book in the Library); the *Codex Evangelarium* (The Four Gospels), bearing the date 1128, also a Greek MS.; the *Biblia Sacra Latina*, belonging to the 12th Century, considered to be the earliest copy of the Scriptures in Australasia. The finest specimen of calligraphy contained in the collection, and perhaps the finest example of manuscript work in these parts, is the *Biblia Sacra Latina Vulgata*, 15th Century. The finest illuminated manuscript is the *Missale Romanum*. Alike for the perfect formation of the letters and capitals, the regularity of the lines, the quality and richness of the red and black inks, the colouring and design of the miniatures and borders, and the brilliant gilding, it justifies the claim.

Of original documents, the Treaty signed by Richard Cromwell confirming the Treaty entered into between Oliver Cromwell and the Protestant Powers, and the Letters and Papers relating to Captain Cook and Sir



CENTRAL LIBRARY: REFERENCE DEPARTMENT.



CENTRAL LIBRARY:
Room containing the Grey and Shaw Collections.

Joseph Banks, formerly in the Brabourne Collection, are documents of historical importance and interest.

The collection of Incunabula and early printed books contains some interesting examples, especially noteworthy being the three Caxtons, viz., Higden's *Polychronicon*, c. 1483; *The Golden Legend*, c. 1484; and *The Boke of Eneydos*, 1490; and two books printed by Richard Pynson—*The Canterbury Tales* of Chaucer, c. 1493, and *Nova Statua Anno I.—XII. Henrici VII.*, 1497.

Besides Incunabula the Grey Collection is rich in literary rarities, conspicuous among which are *The Faerie Queene* of Spenser, 1590, 2 parts; the First, Second, and Fourth Folios of Shakespeare, and Shakespeare's *Poems*, 1640.

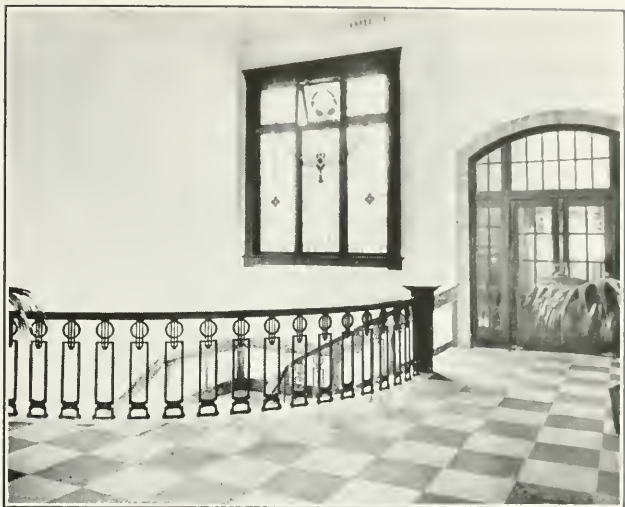
The autograph letters, which form part of the collection, are also of importance.

Among other donors to the Library whose gifts entitle them to be mentioned are the late J. T. Mackelvie, who bequeathed a collection of books which contains a large number of choice and rare art works; the late Mr. E. A. McKechnie, whose gifts include a number of useful books in general literature; and Mr. Fred. Shaw, the donor of a large collection of books, particularly strong in dramatic literature. The most important of recent donations is undoubtedly that of Mr. Henry Shaw, who, in 1912, presented his collection, the hobby of a life time, to the citizens.

The H. Shaw collection partakes of the character of the Sir George Grey collection, containing as it does a number of manuscripts, early printed books and a splendid collection of works in general literature in best copies. It is especially strong in specimens of Oriental illuminated work, in which the Grey collection is deficient; also in Fifteenth and Sixteenth Century printed books, of which Augustine's *De Civitate Dei*, 1467, printed by Johann Mentelin, of Strassburg, is notable, among other reasons as being the earliest printed book contained in the Library. From many others with outstanding claims we select for special mention the *Biblia Latina*, 1479, the production of Adolf Rusch, of Strassburg, on account of its perfection of workmanship. Of the modern books, typical is the magnificent copy of *The Holy Land and Egypt and Nubia*, 6 volumes, by David Roberts, R.A., which has lithographs coloured by hand in imitation of the original drawings. The section of the Shaw collection devoted to art and art crafts is also worthy of special mention. Still another feature of Mr. Shaw's work as a collector is the grangerized books, the *Edinburgh Folio Shakespeare*, which has over 3,000 illustrations added to it, being the most important, but by no means an isolated example of this form of book-making.

Of monetary bequests the gift of £12,150 made by the will of the late Edward Costley, who died on April 18, 1883, is the most outstanding.

The growth of the Public Library has been interesting and in recent years most marked. Commencing in



CENTRAL LIBRARY: UPPER LANDING.



CENTRAL LIBRARY: CHILDREN'S ROOM.

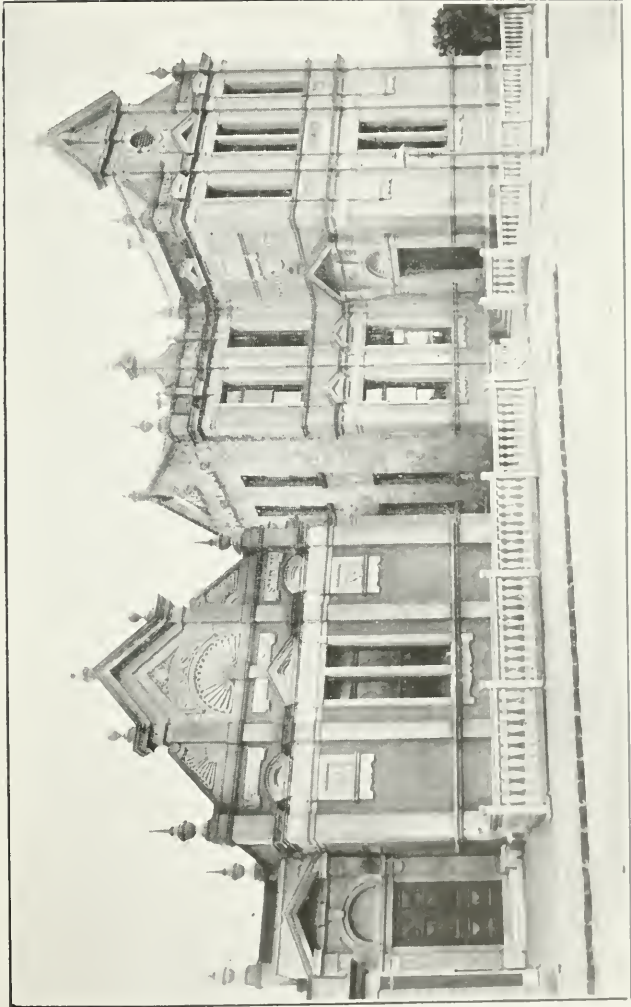
1880 with about 6,000 volumes, it had increased by 1887 to 15,000 volumes, due largely to the acquisition of Sir George Grey's Library. In 1889 a Lending Department, which has steadily increased in popularity, was inaugurated. In 1913 a fireproof room was opened by the Mayor (Mr. C. J. Parr) for the purpose of suitably exhibiting the Grey and Shaw collections.

Library work with children was undertaken in 1917, when a system of school class-room libraries, organised and provided by the Library, was commenced; and in the following year, upon the removal of the Grey and Shaw collections to another room in the building, a Children's Department (reading room and home-reading section combined) was instituted, and was opened by the Mayor (Mr. J. H. Gunson) on October 16th, 1918. In 1920 a commercial section, which has already proved its usefulness, was inaugurated.

The extension of the City's boundaries rendered the establishment of district libraries a necessity. The first library of this class to be inaugurated was the Leys Institute, which, while forming part of the City's library system, is managed by a separate committee, consisting of nine members, of whom two are trustees of the late Wm. Leys, three elected by members of the Institute, and four nominated by the City Council.

THE LEYS INSTITUTE.

The Leys Institute was founded under the will of the late William Leys, who died on 5th October, 1899. The funds available being inadequate for the early realisa-



THE LEYS INSTITUTE

tion of the testator's benevolent purpose, Mr. T. W. Leys, a brother of the deceased, and one of the trustees, offered to defray one-half of the entire cost of erecting and equipping a building and to furnish it with a library, on condition that the Corporation provided a suitable site. This proviso was readily agreed to by the City Council, and on March 29th, 1905, the Leys Institute was officially opened by the Mayor (Hon. E. Mitchellson). The building and equipment, exclusive of books, cost £3,231. In 1906 the gymnasium was erected at a cost of £1,524, exclusive of equipment, and in 1908 a new Lending Library building, the gift of Mr. T. W. Leys, was added. The gymnasium was subsequently altered into a hall specially adapted for a Boys' Reading and Recreation Room and Gymnasium. The total expenditure on buildings and equipment has been £6,601. An addition to the Lending Library building is now being made by the Trustees at a cost of about £1,200. Of the 23,290 books in the Reference and Lending Libraries, 16,817 have been presented by Mr. T. W. Leys, LL.D. These include 1,404 volumes on the Fine Arts and 2,072 on the Useful Arts and Trades, which form a separate division of the Reference Library. The total expenditure on the Institute and maintenance to the 31st March, 1922, is estimated at £15,632. The endowment created by the late Mr. Wm. Leys, which is now subject to the rights of certain beneficiaries under his will, is valued at £15,500.

The Boys' Reading and Recreation Room is open free from 7 to 9 on every night except Saturday. The

number of boys on the roll is 288, including 66 Boy Scouts. The attendance averages about 40. This is probably the largest boys' institute in the Dominion. Mr. T. W. Leys, LL.D., has been president of the Institute since its inception, and the success which it has attained has been due in great measure to his personal interest in and benefactions to it.

Cricket, football, and swimming clubs are affiliated to the Institute.

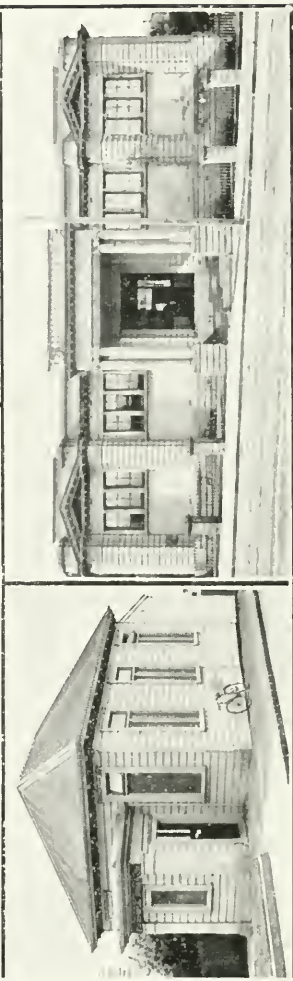
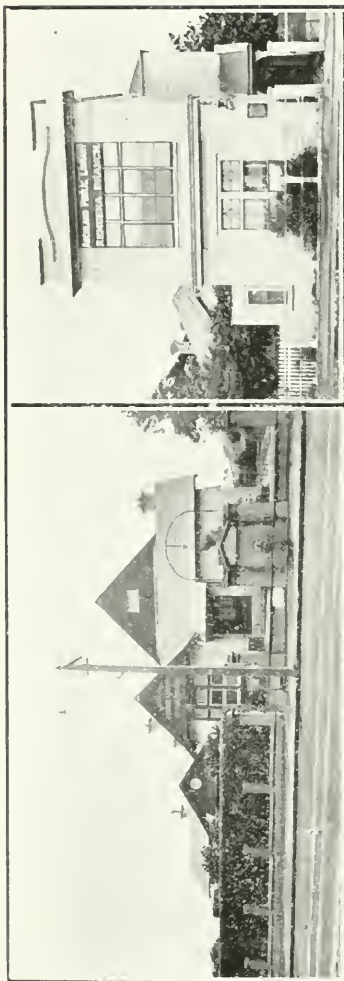
BRANCH LIBRARIES.

Other branch libraries were established in Grafton at Mount Eden Road (1913); in Parnell, Manukau and St. George's Bay Roads (1913); in Remuera, near Victoria Avenue (1915); and in Epsom (1918), the fine premises formerly belonging to the Manukau Water Supply Board being acquired for the purpose. Each of these libraries consists of a Reading Room, Lending Department, and Children's Section, Epsom and Remuera having a separate room for boys and girls.

A feature of the work of the libraries is the course of lectures and entertainments arranged each winter at the Leys Institute, Grafton, and Epsom libraries, each of which has a hall attached, with a seating capacity for over 300 persons.

Mr. Edward Shillington was the first librarian, and he occupied the position until 1913, when the present Chief Librarian was appointed.

The following statistics give in tabular form the principal facts of the present position and activities of the libraries:—



BRANCH LIBRARIES:

Remuera.

Grafton.

Epsom.

Parnell.

STATISTICS FOR THE YEAR ENDING 31st MARCH, 1921.

A. STOCK.

Department	Central	Leys Inst.	Epsom	Grafton	Parnell	Remuera	Schools	Total
Reference Department	.. 41,051	15,155	96	286	73	143	—	57,762
Lending Department	.. 15,063	10,157	2,113	5,333	3,412	3,683	—	39,761
Children's Department	.. 1,873	1,085	380	—	—	431	4,194	7,965
Grand Total	.. 60,987	24,375	2,589	5,619	3,485	4,257	4,194	105,486

B. ESTIMATE OF NUMBER OF VISITORS TO THE VARIOUS DEPARTMENTS. EXCLUDING LENDING DEPARTMENTS.

Department	Central	Leys Inst.	Epsom	Grafton	Parnell	Remuera	Total
Reference or Reading Room	.. 139,853	26,013	9,018	24,846	13,539	5,708	218,977
Newspaper Room	.. ..	256,152	—	—	—	—	256,152
Children's Room	.. 16,105	*	7,184	—	—	7,691	30,980
Grand Total	.. 412,110	26,013	16,202	24,846	13,539	13,399	507,109

*See reference to Boys' Reading Room under heading Leys Institute.

C. RETURN OF VOLUMES CONSULTED AND ISSUED FROM APRIL 1st, 1920, TO MARCH 31st, 1921.

Reference Department.

Library.	Gen. Works.	Phil & Soc. Religion.	Lang. and Sci. Lit.	Use. Arts.	Fine Arts.	Hist. and Biog.	Travel.	Fictn.	Juv.	Commer. clal.	TOTAL.	DAILY AV. 1920-1 1919-20				
Central	..	5,182	7,120	7,479	11,607	7,775	17,169	7,062	9,298	6,064	4,977	—	6,800	88,525	248	210
Leys	..	285	786	551	819	407	1,016	582	811	713	310	—	—	6,290	21	23
Total	..	3,467	7,906	8,010	12,420	8,180	18,185	7,644	10,109	6,777	5,317	—	6,800	91,815	269	263

Lending Department.

Central	..	19,967	1,723	1,128	3,653	920	1,085	933	6,100	3,043	87,586	9,186	—	135,384	157	376
Leys	..	4,099	81	59	110	11	26	8	1,025	391	32,283	4,081	—	42,180	141	108
Epsom	..	10,157	101	149	300	77	63	69	753	753	22,345	3,893	—	38,940	132	91
Grafton	..	5,322	53	97	248	40	65	79	620	559	27,519	5,184	—	57,786	125	105
Parnell	..	6,671	121	80	191	55	79	80	518	521	18,677	3,120	—	30,113	160	78
Remuera	..	5,868	61	127	241	71	65	81	725	783	26,380	6,161	—	40,564	137	119
Schools	..	—	—	—	—	—	—	—	—	—	—	50,961	—	50,961	—	—
Total	..	52,584	2,200	1,640	4,745	1,180	1,581	1,259	9,741	6,055	214,590	60,586	—	555,948	1,092	877
Total of Refs. and Lend. Depts.	..	56,051	10,106	9,650	17,163	9,360	19,566	8,891	19,850	12,830	219,907	67,386	6,800	450,763	1,361	1,110

D. NUMBER OF BORROWERS AND DEPOSITORS AT 31st MARCH, 1921.

Library	Subscribers		Depositors	
	Adult	Juvenile		Total
Central	..	210	202	1,883
Leys	..	53	200	725
Epsom	..	57	7	517
Grafton	..	48	46	520
Parnell	..	47	31	408
Remuera	..	72	90	598
Total	..	487	506	4,651
Total last year	..	432	409	3,895



THE NEW GALLERY.



THE ART GALLERY.

Showing portions of the City Gallery, the Mackelvie Gallery, and the New Gallery.

ART GALLERY.

The Auckland Art Gallery—the first permanent Art Gallery erected in the Dominion—was opened on February 17th, 1888, by the Governor, Sir W. F. D. Jervois, before a large attendance of citizens, Mr. A. E. T. Devore, Mayor, presiding. At the date of opening the contents of the gallery were small, consisting of the Grey Collection, a few pictures by local artists, and others presented by the late J. McCosh Clark, Albin Martin, and the Auckland Society of Arts.

From this small beginning the Gallery has steadily grown until to-day it contains a collection of pictures and works of art, which will compare more than favourably with the galleries of British, American, or Australian cities of the same population, and even with those of greater size. This happy condition is due to the public spirit of many Auckland citizens, who have at various times made presentations to the collections.

The outstanding position occupied by the Art Gallery is due, most of all, to the bequest of the late James Tannock Mackelvie, at one time a resident of Auckland. Mr. Mackelvie died in 1885, and by his will bequeathed his art collection and a large sum of money, in trust, to establish a Museum of Fine Arts for the people of Auckland. Mr. Mackelvie's will instructed his trustees to erect a separate gallery, but the funds at their disposal at the time being insufficient, Mr. J. H. Upton, then Mayor, suggested to the Trustees that the Corporation would erect an addition to the Auckland Art

Gallery for the purpose of housing the Mackelvie collection. This proposal was accepted by the Trustees, and an agreement was thereupon entered into between the Trustees and the Corporation, which being ratified by the Supreme Court, the Council carried out its undertaking, the gallery known as the Mackelvie Gallery being completed and opened in 1893.

So rapidly did the City and Mackelvie collections grow that in less than two decades the accommodation became insufficient, but with the transfer, in 1911, of the Municipal Offices, which had up to this time occupied rooms in the Library and Art Gallery building, to the new Town Hall, further accommodation was obtained for the collections. Alterations were undertaken with this object in view, and were duly completed, the re-opening of the Galleries taking place on January 28th, 1913, Mr. C. J. Parr, Mayor, presiding, and Mr. Devore and Mr. Upton, ex-Mayors, who had been associated with the previous functions connected with the Library and Art Gallery, taking part in the ceremony. Mr. Upton was now chairman of the Mackelvie Trust.

Still the space was insufficient, and in 1914 the rate-payers approved the raising of a loan of £4,000 to erect an additional gallery, which was opened by Mr. J. H. Gunson, Mayor, on 12th December, 1916. Mr. J. H. Upton delivered an address on this occasion.

The record of expansion still continues. At the present time the galleries are more congested than ever,

and the question of extra accommodation is again engaging the attention of the Council.

A word on the artistic value of the collections. The Grey collection contains many old canvasses, some of which are reputed to be, and undoubtedly are, genuine old masters: others may be replicas or copies of the originals. The City collection contains a number of interesting British and Continental paintings, including examples of Alfred Parsons, Brangwyn, T. McEwan, J. R. Reid, Terrick Williams, R. Anning Bell, J. L. Pickering, Stanhope Forbes, A. Hacker, Briton Riviere, Harold Knight, Watson Gordon, T. B. Kennington, T. B. Hardy, W. Duffield, Sir E. A. Waterlow, G. Chambers, J. J. Tissot, and A. J. Hanson. The section devoted to New Zealand artists contains paintings by Miss Richmond, L. J. Steele, P. Van der Velden, C. F. Goldie, F. and W. Wright, C. Blomfield, J. Gibb, T. L. Drummond, R. Proctor, K. Watkins, Albin Martin, C. W. Foster, G. E. Butler, E. Spenser Macky, W. Menzies Gibb, C. N. Worsley, John Gully, J. C. Hoyte and others.

The Mackelvie collection consists of two broad divisions, paintings and *objets d'art*. The latter, collected by Mr. Mackelvie himself, comprises what is perhaps the most valuable aggregation of its kind among Australasian collections. In it are to be found beautiful examples of carvings in metal, wood and ivory, porcelain, crystal ware, mosaics, terra-cotta, enamelled ware, miniatures, antique clocks, watches, snuff-boxes, bon-

bonnieres and furniture. The picture collection which, in addition to Mr. Mackelvie's own selection, has been made largely upon the advice of Sir George Reid, P.R.S.A., and the late Marcus Stone, R.A., covers a wide field of Modern British Art. The latest purchases were made by Dr. T. W. Leys, one of the Mackelvie Trustees, while on a recent visit to England and the Continent, his tour on the latter resulting in the purchase of some European artists' work. Among the oil paintings are works by Gilbert, Gow, Logsdail, Julius Olsson, Arnesby Brown, Bramley, Llewellyn, Alma-Tadema, Waterlow, Moore, Blair Leighton, D. Farquharson, S. M. Fisher, Somerscales, Goodall, Hughes-Stanton, Murray, Clausen, La Thangue, Hall, East, Brangwyn, Padday, Turner, and Roche. Of the water-colours, special mention should be made of three exquisite Birket Foster's. Recent acquisitions include examples of Macwhirter, Graham, Herkomer, Bundy, Long, Collier, Munnings, Laura Knight, Spenlove, Roll, Lynch, Dupuy, Dinet, Nicot, Masriera, and Gomez Gil, the last seven being Continental artists.

The original Mackelvie Trustees were Messrs. David S. Murdoch, J. Logan Campbell, Thomas Russell, and Albin Martin. The present Trustees are Messrs. J. H. Upton (Chairman), A. S. Bankart, A. Clark, T. W. Leys, and the Mayor of Auckland, ex-officio.

In addition to the foregoing, the Gallery also contains the collection of Maori studies painted by Herr G. Lindauer, which are a unique representation of Maori life and customs. The value of these paintings, from an

ethnological point of view, is inestimable. The collection was presented to the City, in 1915, by Mr. H. E. Partridge, who was the patron of the artist.

The Russell Collection of Casts is also housed in the Gallery. They were presented to the Auckland Museum in 1878 by the late Thomas Russell, C.M.G. By an arrangement with the Council of the Museum and the City Council, the statuary has been deposited in the Art Gallery in exchange for the Sir George Grey collection of Maori curios, which has been transferred to the Museum. Neither body has relinquished the ownership of its collection.

The popular esteem in which the Art Gallery is held may be gauged by the attendance of visitors, which for the year ending 31st March, 1921, totalled 148,579 persons.

OLD COLONISTS' MUSEUM.

This museum, which occupies two large rooms on the top floor of the Library and Art Gallery building, was opened by Mr. J. H. Gunson, Mayor, on 22nd March, 1916. It contains a collection of pictures, maps, prints, documents (printed and manuscript), and objects illustrating the history and development of New Zealand, especially the Auckland Province and City. The arrangement of the pictures is chronological, beginning with the discovery of New Zealand by Tasman in 1612, its re-discovery by Captain Cook, and the subsequent stages it passed through from the days of the mission-

aries, whalers, and traders until the advent of British sovereignty. The stirring days of conflict with the Maoris, which passed away in the 'sixties, are also well represented. The City's history may be followed in the same way from 1840-70.

The Museum owes its origin chiefly to the suggestion of Messrs. Leys and Shaw, who were impressed with the Early Settlers' Museum, Dunedin. From the time the scheme was launched, during Mr. Parr's Mayoralty, the citizens are greatly indebted to the numerous donors who have presented items to the collection, and especially to Sir Edwin Mitchelson, M.L.C., Mr. T. W. Leys, LL.D., and Mr. Henry Brett, for the time, thought, and money which they have spent upon it.

The items contained in the Museum now total 750. The only regret in connection with the Museum is the inadequacy of the accommodation wherein to exhibit satisfactorily the objects of interest which it contains.

JOHN BARR,
Chief Librarian and Director.



ALBERT PARK FORMERLY THE SITE OF ALBERT BARRACKS

T. H. KENNEDY, PH. I.

PARKS AND RECREATION RESERVES.

Prior to 1900 the City possessed only three areas devoted to Park purposes, *viz.*, Albert Park, acquired in 1871, Western Park, which became City property four years later, and the Domain, which was not vested in the City Council until 1893; but little was done in developing these areas until recent years. A period of activity in the acquisition of Park grounds commenced with the opening, in 1911, of Point Erin Park, and since that date many other grounds have been added either by purchase, gift, or lease, both within the City boundaries and beyond. At the present time the Council controls over 8,000 acres of Park and Reserve land. Development of these areas has also been stimulated, and in the last twelve years much progress in this direction has taken place.

ALBERT PARK (14 Acres).

Albert Park, which occupies part of the site of the old Albert Barracks, is situated in the heart of the City, a few yards away from Auckland's main thoroughfare, Queen Street, and, being on elevated ground, provides excellent views of the Harbour and City. The property was handed over as Park grounds to the Council on April 18th, 1871. Traces of the old Barracks wall can still be seen in the Park and in Princes Street. On the latter, dividing the Metropolitan Grounds from Government House Grounds, a small



ALBERT PARK.



ALBERT PARK.
The Princes Street Border.

marble tablet, bearing the following inscription, has been placed:—

TO COMMEMORATE THE UNION AND COMRADESHIP OF PAKEHA AND MAORI DURING THE GREAT EUROPEAN WAR, THIS TABLET WAS FIXED BY THE AUCKLAND CIVIC LEAGUE, SEPTEMBER, 1915, ON THE REMNANT OF THE BARRACK WALL, BUILT BY FRIENDLY MAORIS, IN 1848, AFTER THE BURNING OF KORORAREKA.

The Park grounds are well laid out in flower beds and borders. The Princes Street border, running parallel with the street of that name, is about 600 feet long, and is continuously kept gay with a fine display of the gardener's art.

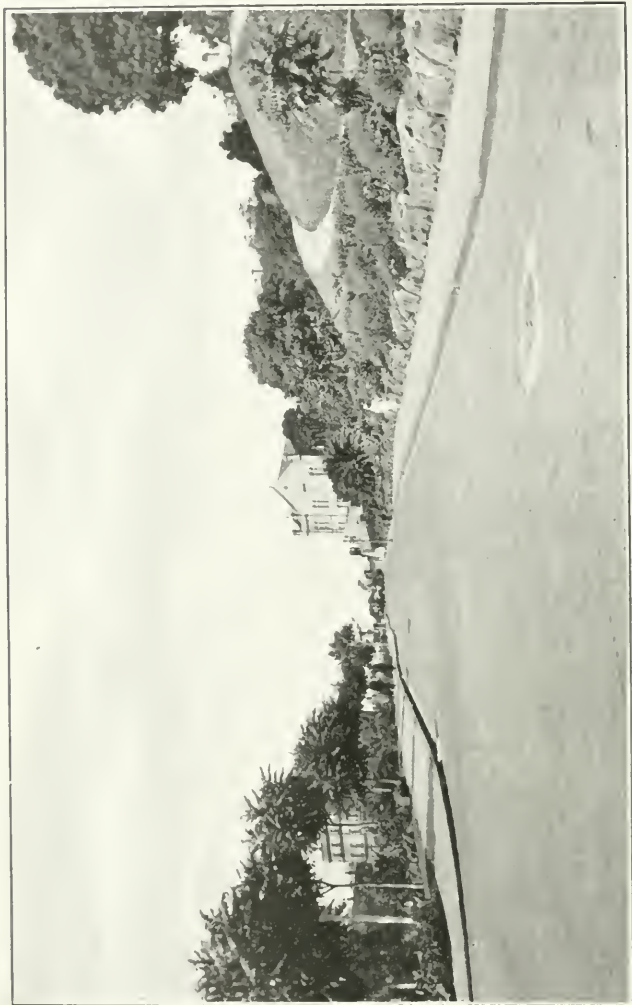
The lesser borders of the Park include the Boyd border and small beds, in which are fine displays of giant hydrangeas, as well as suitable flowering shrubs and plants.

The smaller beds are laid out during the year with spring flowering bulbs, and several are furnished during the summer and autumn with carpet bedding to design.

Roses, of which there are now nearly 300 varieties, occupy a prominent position. Fine specimens of Canary Island palms (*Phoenix Canariensis*), as well as many other exotic trees, such as *Cedrus Deodara*, *Cedrus Atlantica*, and many fine types of English and American oaks, English elms, birches, etc., have been introduced.

A feature of this Park is the area known as Bowen Avenue, which, a few years ago, was a refuse tip, but

BOWEN AVENUE.



has since been planted out in eucalypti and palms, and margined off in rock work, containing suitable plants for this class of gardening.

A fountain occupies the centre of the grounds, around which, artistically laid out, are four large panel beds with Spring, Summer, and Autumn bedding plants of gorgeous colouring. Inside the fountain basin, water lilies (*Nymphææ*) have been planted.

Near the fountain the Park Observatory is situated, where records of the meteorological conditions are taken daily by Mr. Burnett.

The Park is adorned with a number of statues, the chief one being that of Queen Victoria, which was unveiled on 24th May, 1899, by the Governor, the Earl of Ranfurly. This statue, which was designed by Mr. Williamson, was the first statue of the Queen erected in New Zealand.

A flag staff is erected on the apex of the slope, and here are located a collection of field guns, from the Crimean and South African Wars, as well as a number of trophies from Gallipoli and the battlefields of France, the latter having been presented to the City by the Defence Department.

On the western side of the Park, facing Wellesley Street, are situated the Public Library, Art Gallery, and Old Colonists' Museum, which add additional pleasure to the visitors to the Park grounds.



DOMAIN CRICKET GROUND: NEW CARRIAGE WAY IN BACKGROUND

WESTERN PARK (6 Acres).

This Park is situated between Ponsonby Road and Beresford Street, and is truly a scenic Park, possessing some good specimens of native and exotic trees. It was vested in the City Council in 1875.

The main path leads from Ponsonby Road to Beresford Street, other entrances being placed in Howe Street and Totara Street. Seats are provided, and on a warm day the Park is an ideal place of rest and refreshment.

DOMAIN (194 Acres).

The Auckland Domain, the oldest Park in the City, was vested in the City Council by an Act of Parliament of 1893. Prior to this date the area belonged to the Government, and was officially designated the Government Domain or Auckland Park.

The Domain consists of a large cricket ground, children's playing ground, a botanic garden, native bush plantations, tennis lawns, etc.

The Cricket Ground, which has entrances from Park Road, Domain Drive and Carlton Gore Road, is the principal sports area of the City. Its dimensions may be judged by the fact that six games of football can be carried on simultaneously. This ground is also used for large outdoor gatherings; it was here that the Prince of Wales, in 1920, witnessed a military review and met the school children of the district. The



DOMAIN: VIEW OF MAIN DRIVE.



DOMAIN: THE BOTANIC GARDENS.

final of the international tennis matches for the Davis Cup between Australasia and the United States was contested on this ground in December, 1920, special courts being laid down for the event.

Prior to the formation of the Cricket Ground, the area was a marsh. The drainage system, which was laid down, has transformed it into the splendid sports ground of to-day. It is also interesting to record that the site is reputed to have been a resort of the old-time Maoris as a place to procure eels for consumption.

The Auckland Exhibition of 1913-14 was held in the Domain, and this event has resulted in great improvements to this Park. A feature of the Exhibition was the manner in which the grounds approaching the buildings were laid out in walks and flower beds. These have been preserved and maintained, adding to the amenity of the Park. While the purpose of the Exhibition was primarily commercial, the executive decided that in the event of a surplus accruing from the undertaking it would be used in beautifying the area used for the Exhibition. The surplus available amounted to over £20,000, which has been expended in improving and beautifying the part of the Domain now officially named the Children's Playing Ground, but better known as the Outer Domain, on which a sports ground, of an area large enough to allow five football matches to be played at one time, has been formed, and new drives and paths made. A Winter Garden has also been erected out of the Exhibition funds, and

is used for the display of palms and pot plants of various kinds. The Winter Gardens were officially presented to the Citizens by Mr. Geo. Elliot (President of the Auckland Exhibition, 1913-14), on behalf of the Executive, on October 12th, 1921. The Mayor of Auckland, Mr. J. H. Gunson, C.B.E., presided, and, on behalf of the Citizens, accepted the care of the new building. The Tea Kiosk and the Band Rotunda, the latter the gift of Mr. J. M. Mennie, are other survivals of the Exhibition. The same citizen presented, at a later date, a statue of Robert Burns, in bronze, which has been erected close to the Bandstand. The figure, which is of heroic size, was the work of Mr. F. W. Pomeroy, R.A., and stands on a granite pedestal, the height overall being 27 feet. It was unveiled by the Prime Minister, the Rt. Hon. W. F. Massey, P.C., on November 5th, 1921.

The Botanic Gardens occupy an enclosed area, neatly laid out in lawns and flower beds, on the north side of the Main Drive. The greenhouses, of which there are nine, are open daily, Sundays excepted, for public inspection, and are of interest and value to both the amateur and professional horticulturist. Plants for the City gardens and reserves are propagated here.

A commanding site in the Domain has been granted by the Corporation to the Council of the Auckland Institute and Museum, and in the near future Auckland's War Memorial and Museum will be erected here.

The Domain may be reached from the City by Symonds Street and across the Grafton Bridge or from Manukau Road, Parnell.

VICTORIA PARK (18 Acres).

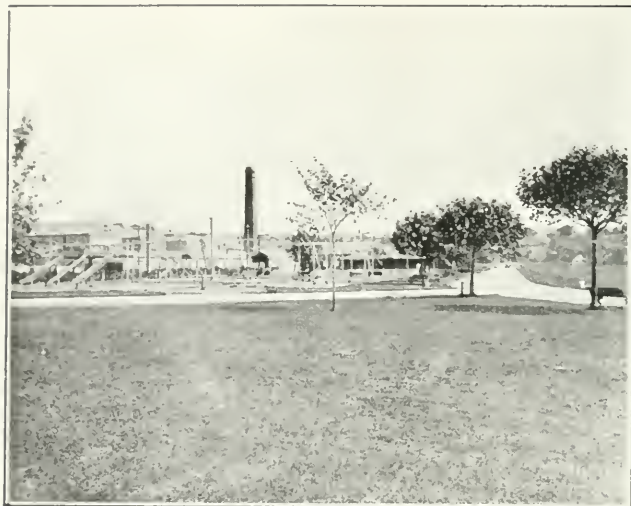
On completion of the Freeman's Bay reclamation, an area fronting Patteson Street, belonging to the Harbour Board, was leased to the City Council at a small annual rental on March 11, 1901. This the Council formed into a reserve suitable for sports and large enough to permit five games of football to be played simultaneously. Courts for tennis, bowls, and croquet have also been made. Part of the area has been surrounded by a rock garden, and the *tout ensemble* is both effective and pleasing. Children have also been catered for, a complete outfit of rockabyes, ladders, Roman rings, swings for babies, giant strides, etc., having been presented by Mr. J. Court, a worthy citizen and ex-Councillor. A lady supervisor of games and an assistant have charge of this section.

BAYFIELD PARK (6 Acres).

Bayfield Park is situated near the Herne Bay tram terminus, and is held in abeyance for further development. It was purchased by the City Council on 29th September, 1906. Part of the ground is used by the Y.M.C.A. for tennis.

GREY LYNN PARK (Appror. 30 Acres).

This Park, which was presented to the Borough of Grey Lynn, in 1909, by the Bank of New Zealand, was



VICTORIA PARK.
Showing the Children's Playground.



MYERS PARK.
Showing (in centre) the Myers' Kindergarten.

added to the City's breathing spaces at the amalgamation of Grey Lynn with the City, in 1914. It is situated in what is locally known as the Grey Lynn Gully. The area has been made into a recreation ground for young people.

COX'S CREEK RESERVE (32 Acres).

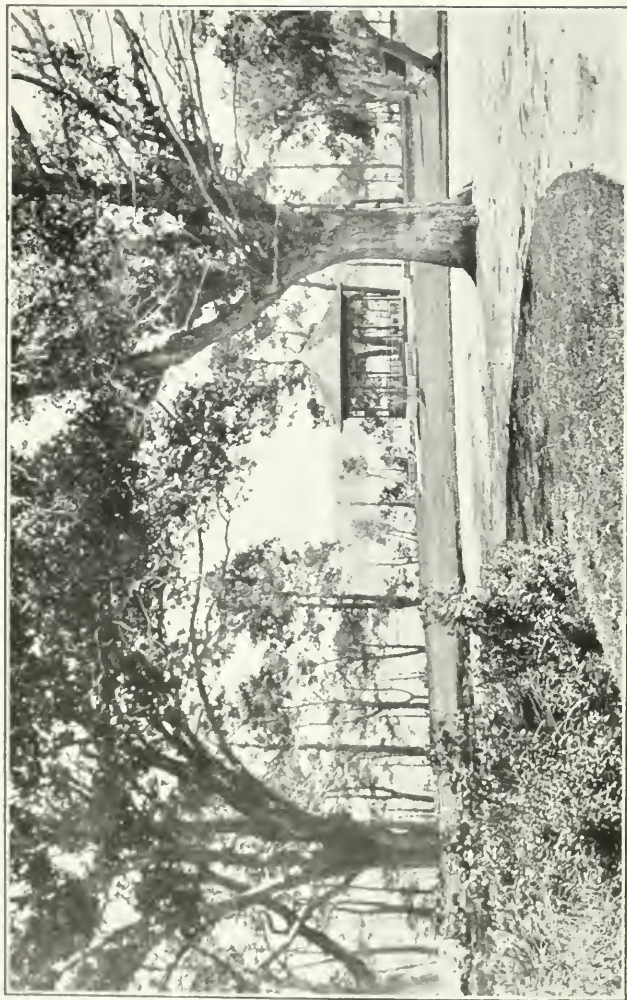
This Park, which is situated in the Ponsonby Borough, in 1909, and transferred to the City at the amalgamation of that district with the City. It remains undeveloped.

POINT ERIN PARK (12 Acres).

This Park, which is situated in the Ponsonby district, was purchased on August 8th, 1911, and opened by Mr. C. J. Parr, Mayor of Auckland, on December 16th of the same year. It has an ideal beach frontage to the Waitemata Harbour, and is adjacent to Shelly Beach, where safe bathing is to be had for old and young. A concrete swimming pond (150ft. by 60ft.) was opened on this beach in 1912.

MYERS PARK (6 Acres).

Myers Park, which is named after the donor, is situated in a gully between Queen and Grey Streets, with entrances from each, and lies just behind the Town Hall. It was presented, in 1913, by Mr. (afterwards the Hon.) A. M. Myers, M.P., who was Mayor of Auckland from 1905 to 1909. The site when purchased by Mr. Myers was an unsightly gully, overgrown with weeds;



POINT ERIN PARK, SHOWING THE WAITEMATA HARBOUR.

it has now been transformed into a delightful reserve, laid out in lawns and flower beds and planted with trees, palms and shrubs (native and exotic).

An additional attraction was provided to the Park grounds in the form of a children's playing area, where swings, rockabyes, Roman rings, ladders, sand pit and wading pool were placed for the enjoyment and pleasure of young boys and girls.

The Park was opened on January 28th, 1915, by Mr. C. J. Parr, C.M.G., Mayor.

Mr. Myers further displayed his interest in the children of the City by erecting at his own cost an ideal Kindergarten, which was formally opened by the Governor, Lord Liverpool, on November 15th, 1916.

PARNELL DOMAIN (11 Acres).

This area is situated on the western side of Gladstone Road. It was vested in the City Council in 1914, but has not yet been developed as a Park area.

MOUNT HOBSON DOMAIN (9 Acres).

The Mount Hobson Domain is one of the numerous extinct volcanic cones which abound on the isthmus: from it splendid views of the harbour can be obtained. It was vested in the City Council, in 1915, subsequent to the amalgamation of Remuera with Auckland. In 1921, 13 acres adjoining this Reserve were transferred to the Corporation by agreement with the Dilworth Trustees.



VIEW FROM PARNELL PARK, SHOWING NORTH HEAD AND RANGITOTO ISLAND.

In pre-European days Mount Hobson was a point of strategic importance in Maori warfare, as it commanded the approach from the Hauraki Gulf. Remains of fighting trenches can still be seen on the slopes of the Mount. Large deposits of shell, several feet deep, commonly known as Maori Middens, are also found on the hill.

PARNELL PARK (9 Acres).

Another Park, with a frontage to the harbour, was acquired in the Parnell district soon after the amalgamation of that Borough with the City, and was opened in 1915. The first section of the Park to be obtained was the Gillies Estate, which was purchased under the Public Works Act. Adjoining this property was "Kilbryde," which for many years had been the home of Sir John Logan Campbell, familiarly known as the "Father of Auckland." This was acquired from the Harbour Board, on January 21st, 1915, and the two properties combined were named Parnell Park, which was opened to the citizens on January 28th, 1915.

Very little required to be done to either of the grounds, and to-day the park forms an ideal and picturesque spot for spending a holiday, being in close proximity to Judge's Bay, on which stands the remains of the old cottage formerly tenanted by Judge Swainson. Delightful views of the harbour are obtainable from the grounds, and bathing may be indulged in on the beach. One of the residences in the Park has been utilised as a tea room.

EPSOM DOMAIN (19 Acres).

On the amalgamation of the Epsom Road Board with the City, in 1917, the Epsom Domain was acquired. Up to the present nothing in the way of improvement has been done to it.

WAIATARUA PARK (156 Acres).

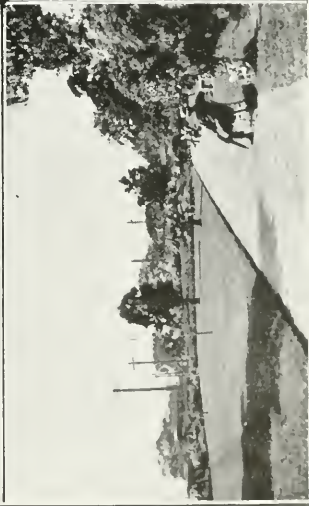
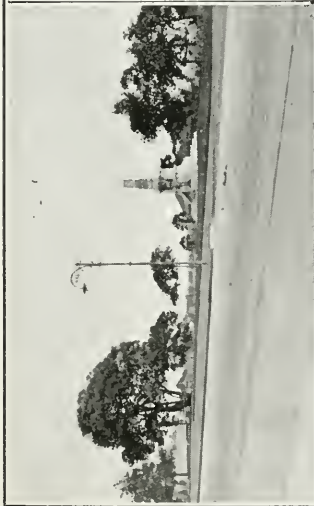
This area of ground was acquired by the City Council in 1918, under an arrangement with Mr. R. H. Abbott, who presented 100 acres of the area to the citizens, and is held in abeyance for Park grounds at a future date. Situated within the property is a large fresh water lake. The grounds at the present time are let for grazing purposes.

CITY RESERVES.

Small Reserves, formed at the junction of wide City streets, or situated at vacant corners of streets, have become a feature of the City's thoroughfares. Some are merely grass plots, which are kept neat, while others are large enough to be described as miniature parks, being replete with flower beds, paths and lawns, where seats are provided.

EMILY PLACE RESERVE.

This Reserve is at the top of Shortland Street, and is kept in neat lawns and flower-beds. St. Paul's Church, the first church erected in Auckland, originally occupied this site. The monument to the Rev. J. F. Churton marks the position which the church occupied.



CITY RESERVES.

Wakefield Street Reserve.

Grafton Road Embankment.

Symonds Street and Karangahape Road Reserve

Marivare Reserve (Manukau Road, Epsom).

ALTEN ROAD RESERVE.

This is a large Reserve, situated near Government House and Supreme Court, planted with shelter trees and laid out in well-kept lawns.

SYMONDS STREET AND KARANGAHAPE ROAD RESERVE AND ROCKERIES.

Both the above Reserves are well laid out in rock-work and flower borders. Karangahape Road Reserve, which is situated close to Grafton Bridge, is very popular, and is in continual use as a resting place by City residents and country visitors.

WAKEFIELD STREET RESERVE

This Reserve contains a fine monument made of New Zealand marble, at the base of which is a bronze figure, erected by the Auckland Branch of the Victoria League to the memory of the men of the Imperial Forces, Colonial Forces, and Friendly Maoris who laid down their lives in the New Zealand Wars. It was unveiled by the Mayor, Mr. J. H. Gunson, C.B.E., on August 18th, 1920.

OTHER RESERVES ARE:

Marivare Reserve, Manukau Road and Ranfurly Road, Epsom, which contains some of the finest specimens of Portuguese oak (*Quercus Lusitanica*) in the district.

Brooks Square Reserve, Ponsonby.

St. James' Square Reserve.

Grafton Road Embankment.

Patteson Street Reserve.

Customs Street West Reserve.

The following Parks belonging to the City are situated beyond the City boundaries.

CORNWALLIS PARK (1,927 Acres).

Cornwallis Park, Auckland's largest beach domain, was presented, in 1911, to the Citizens by the Executors of the will of the late J. Mitchell McLachlan. It is situated on the shores of the Manukau Harbour, and extends from Nihotupu Park to Puponga Point. The area, from which extensive views of the Manukau Harbour and the Waikato country are obtainable, has been preserved in its natural condition, and contains fine groups of native bush. A monument, in memory of the donor's mother, was erected on Puponga Point by the City Council. To gain access to this domain, take train to New Lynn, thence by motor, *via* Titirangi.

TITIRANGI PARK AND SCENIC RESERVE

(30 Acres).

This Reserve was gifted to the City of Auckland by the late Henry Atkinson, on February 17th, 1913. From the highest point of this Reserve, Mount Atkinson, which reaches a height of 654 feet above sea level, commanding views of the whole Isthmus and surrounding country can be obtained. A motor drive on a

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moderate gradient has been formed up Mount Atkinson, and motor-cars can easily ascend to the top of the hill. On the lower portion of the Reserve, pathways have been formed through the steep bush, to Titirangi Beach, an ideal spot for picnic parties, where bathing may be indulged in, thousands of people availing themselves of the opportunity thus afforded during the summer months. Motor-cars can be driven down to the beach in dry weather.

A motor road, named the Exhibition Drive, was constructed, at a cost of £1,000, through the joint effort of the City Council and the Auckland Automobile Association, and was opened on January 25th, 1914. The road follows the pipe line of the water supply from Nihotupu, and joins the West Coast Road from Waikunete. The drive abounds in native bush, Kauri and Nikau palms being most prominent. A fine specimen of the former (*Agathis Australis*) may be seen on Mr. A. Clark's property, situated a little beyond the settling tanks of the City Council.

PIHA DOMAIN (146 Acres).

Piha Domain, situated on the West Coast, is another asset of the citizens which was placed in the care of the Corporation in 1916.

KAITARAKIHE PARK (761 Acres).

This Park, also situated on the Manukau Harbour, which like the other Parks in this area is covered with native bush, was presented to the City in 1918, by Mr

Wesley Spragg, who erected in the grounds a handsome granite obelisk to the memory of his son, Lieutenant Neil Spragg, and of the men who fell during the great war. The Park was opened and the memorial unveiled by His Worship the Mayor, Mr. J. H. Gunson, on 17th March, 1920. To gain access to this Park, take the same route as to Cornwallis Park.

NIHOTUPU DOMAIN (4710 Acres).

The watershed in the vicinity of Nihotupu has been vested in the Council in connection with the water supply of the City.

CORNWALL PARK (230 Acres).

This Park, which is situated just beyond the City's boundaries, does not belong to the Council, but is vested in a Domain Board. It is nevertheless one of Auckland's principal reserves.

The grounds have been maintained as a scenic park, there being only a few flower beds laid down. A portion of it has been kept for sports, and the Maungakiekie Golf Club has a number of greens within the Park area. Picnic parties find it a favourite resort.

Maungakiekie (One Tree Hill) is the highest point within this Domain, and from it magnificent views of the Hauraki Gulf, the Manukau Harbour, and the country surrounding Auckland can be had.

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The Park was the gift, in 1901, of one of Auckland's most venerable pioneers, Dr. (afterwards Sir) John Logan Campbell, who arrived in New Zealand in 1829, and took up residence in the City after its foundation. From then until his death, in 1912, he was continuously associated with the City. His remains repose on the summit of One Tree Hill. The Park was named in commemoration of the visit of the Duke and Duchess of Cornwall and York, in 1901.

At the northern entrance to the Park stands a statue of Sir John Logan Campbell, which possesses striking features of style and workmanship, and worthily commemorates the "Father of Auckland."

T. E. PEARSON,
Superintendent of Parks.

CITY ENGINEER'S DEPARTMENT.

STREETS.

The important position that roadmaking now occupies in the City Council's policy is reflected in the progress made in the past decade. Prior to 1911 the City possessed one paved street, viz., Queen Street, which, in 1902, was paved with Neuchatel Asphalt, coincident with the construction and opening of the Electric Tramway system. At the present time there are 10 streets paved with Neuchatel Asphalt on a concrete foundation, of a total length of 2.5 miles and an area of 61,312 sq. yards; 6 paved with wood blocks on a concrete foundation, of a total length of 1.4 miles and an area of 32,336 sq. yards; and 17 paved with cement concrete of a total length of 5.6 miles and an area of 118,074 square yards. There are also 2 short lengths of stone sett paving, of 2663 square yards. Concrete paving has been used more extensively in Auckland than in any other city in New Zealand or Australia, and it has been laid in streets carrying the heaviest traffic.

The City has been equally progressive in other directions. Out of a total of 184 miles of streets, comprising 756 in all, 367 streets, of a total length of 83 miles, have been fully kerbed and channelled, and 93 streets have been kerbed and channelled for a portion of their length, adding a further 19 miles of kerbed streets, and making a total of 102 miles.

AKKLAND MUNICIPAL HANDBOOK.

In the matter of surfacing macadamised streets, the policy of tarring and dressing has been largely adopted, and at the present time 22 miles of carriage-way have been so treated.

For the surfacing of footpaths the laying of tar topping on the more important streets, and of tar dressing on others, has been adopted, and in all 1,261,700 square yards, or approximately 260 acres, are treated in this way.

Where private cart or carriage entrances cross the footpaths, stone sett, concrete, asphalt, wood-blocks, or tar macadam paved surfaces are provided at the cost of the owners, so that a good surface for pedestrians is assured on all properly-formed footpaths.

IMPORTANT IMPROVEMENT SCHEMES.

Apart from paving operations, the Council has of late years carried out many very important schemes, having for their object the improvement of the principal traffic routes in the City. The most notable of these is the scheme known as the Eastern Outlet, which was started in 1915 and completed in 1920. The trams commenced to run on this route in February, 1921.

The work comprised the widening of Beach Road from 66 feet to an ultimate width of 110 feet. An agreement was made with the Railway Department, under which it contributed a 30-foot strip of land along the



JERMYN STREET (now Anzac Avenue),
before commencement of improvements.



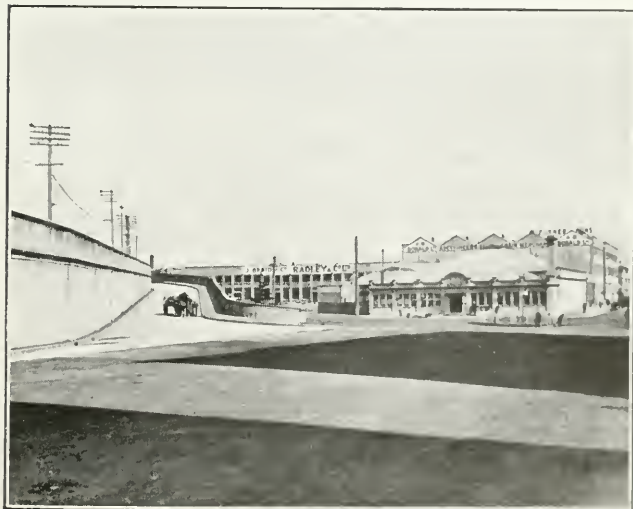
ANZAC AVENUE,
after completion of improvements.

greater part of this road. The remainder of the land required was obtained by the Council acquiring the whole of the properties between Beach Road and the narrow street known as Jermyn Street, together with the land and properties on the western side of Jermyn Street. The latter street was only 33 feet wide, and was most awkwardly graded, having two or three hollows in its length and some very steep grades. The Council having obtained the power to acquire the whole of the properties, proceeded to construct what is virtually a new street, 84 feet wide, since named Anzac Avenue, which, for a portion of its length, follows the line of Jermyn Street, and joins at its lower end, with bold curves, Beach Road; and at its upper end, Symonds Street, after passing over the site of the old University College, formerly the first Parliament building of New Zealand.

Apart from the acquisition of property, which has cost in all £234,000, the Council has spent the sum of £43,500 in excavating the property to new levels, involving in the course of constructing the new road (Anzac Avenue) and levelling the sections abutting thereon, the removal of approximately 70,000 cubic yards of spoil, and a similar quantity in excavating the sections abutting on Beach Road, and forming, kerbing, and paving Anzac Avenue from the Junction of Beach Road to Symonds Street, while a further sum of £16,200 has been spent in kerbing and paving Beach Road.



GILLIES AVENUE.
Example of Suburban Highway.



CUSTOMS STREET WEST, Baths.
Showing Retaining Walls and Hobson Street Baths.

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At the time of embarking upon the scheme, it was anticipated that the sale of properties, after the improvements had been completed, would practically reimburse the cost of acquiring the property and carrying out the improvements. But owing to the long duration of the war, and the unsettled conditions which have succeeded it, it was found that the interest charges on the large amount of capital sunk in the undertaking would prevent this expectation being realised, and £100,000 of Loan money has been raised.

The improvements are, however, of so important a character that the work is fully justified, and it is probable that the increased ratable value of the properties will enable the Council to meet the annual capital charges in connection with the scheme.

Important improvements, with the co-operation of the Auckland Harbour Board, have also been effected on the water-front, the principal one being the widening of Customs Street West and its continuation (Fanshawe Street) to and past the north of Victoria Park, as a 100-foot wide street.

The works carried out include the erection of three reinforced concrete retaining walls, aggregating a total length of 1,775 feet, the construction of a high and a low level road, each 80 feet wide, between Albert and Nelson Streets, and an inclined roadway, 20 feet wide, connecting them at the Hobson Street intersection.

Lower Hobson Street, from the low level road to the wharf, was also widened to 100 feet, and a graded

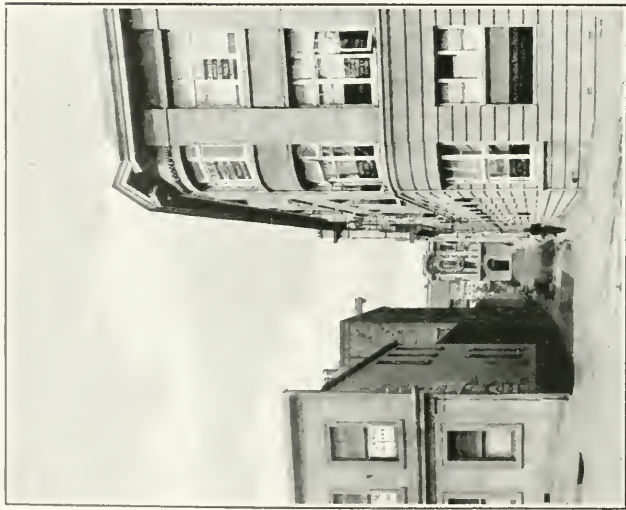
road, leading from the high level road connecting with Nelson Street, formed.

Fanshawe Street, from its intersection at Nelson Street to Victoria Park, was increased in width to 100 feet, and from that point northward an extension of Fanshawe Street was constructed as far as Beaumont Street. The total cost of carrying out these improvements was £46,646.

In connection with this series of undertakings the Harbour Board was able to assist, by arranging for the transfer of lessees' interests from property required for street purposes to other portions of the Board's property.

The waterfront on the eastern side of Queen Street has also been improved. The improvements were made possible in the first place by the reclamations carried out by the Harbour Board and secondly by the co-operation of the Board and the Railway Department with the City Council. Prior to the alterations being undertaken, Quay Street practically finished at Breakwater Road. A new road, named King's Drive, 100 feet wide, now continues Quay Street in a straight line to the cliff at Campbell's Point. In the course of the work connected with this scheme, the old locomotive sheds were removed to an adjacent locality.

Another improvement was carried out in conjunction with the Railway Department: Mechanic's Road, a narrow tortuous street, being converted into a bold curved roadway, 100 feet wide, and renamed the Strand.



O'CONNELL STREET.

Before widening operations were commenced.



O'CONNELL STREET.

After completion of widening and paving operations.

Street-widening operations have been carried out in other districts, a portion of Symonds Street, opposite Khyber Pass Road, and a strip of Mount Eden Road, adjacent to the Grafton Library, being increased from 66 feet to 76 feet. Another section of Symonds Street, south of St. Paul's Church, was widened to 90 feet by the erection of a reinforced concrete retaining wall on what was originally intended to be the line of street, but which evidently had been abandoned on account of the steep nature of the country abutting the road.

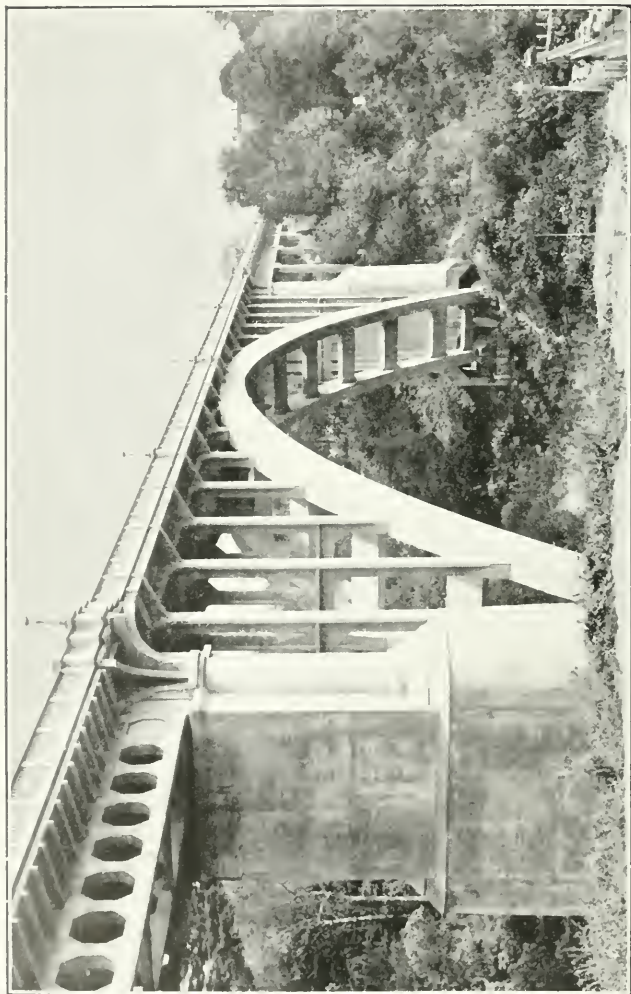
O'Connell Street, one of the City's oldest thoroughfares, which was originally 18 feet wide, has been increased to 33 feet, the work being carried out with the co-operation of the property owners on the eastern side of the thoroughfare. The alterations necessitated the removal of Auckland's first wooden house, erected by the late Sir John Logan Campbell, to a new site in Cornwall Park.

High Street has also been increased in width from 29 feet to 33 feet on a portion of its length.

The most recent operation of this class was the widening of Remuera Road at the base of Mount Hobson, where, although the maximum increase of the roadway did not exceed nine feet, the improvement is considerable.

LIGHTING OF STREETS.

The principal business streets and tramway routes of the City are lighted by electric lamps, four of which



GRAFTON BRIDGE.

are of 2,000 candle power, 32 of 1,000 candle power, 65 of 100 candle power, and 26 of 32 candle power.

Gas lights, of which there are 920, each 50 candle power (nominal), are used for the illumination of residential and suburban streets.

BRIDGES.

The only bridge of any importance in the City, with the exception of one or two bridges belonging to the Railway Department, is the Grafton Bridge, the others being wooden structures over creeks, etc.

Grafton Bridge is notable as having the longest three-hinged arch in the world, and was, at the time of its construction, the longest single-span arch constructed in reinforced concrete.

The Bridge, which is 973 feet in length, consists of 11 girder spans, besides the central arch span, made up as follows:—

One span of 35 feet.

One span of 37.5 feet.

Three spans of 75.5 feet each.

One span of 81 feet.

Two main piers, 13 feet each.

Centre span, 320 feet.

One straight girder, 83.5 feet.

One straight girder, 80.5 feet.

One straight girder, 41 feet.

The balance is made up by filled up approaches of 20 and 22 feet respectively at each end.

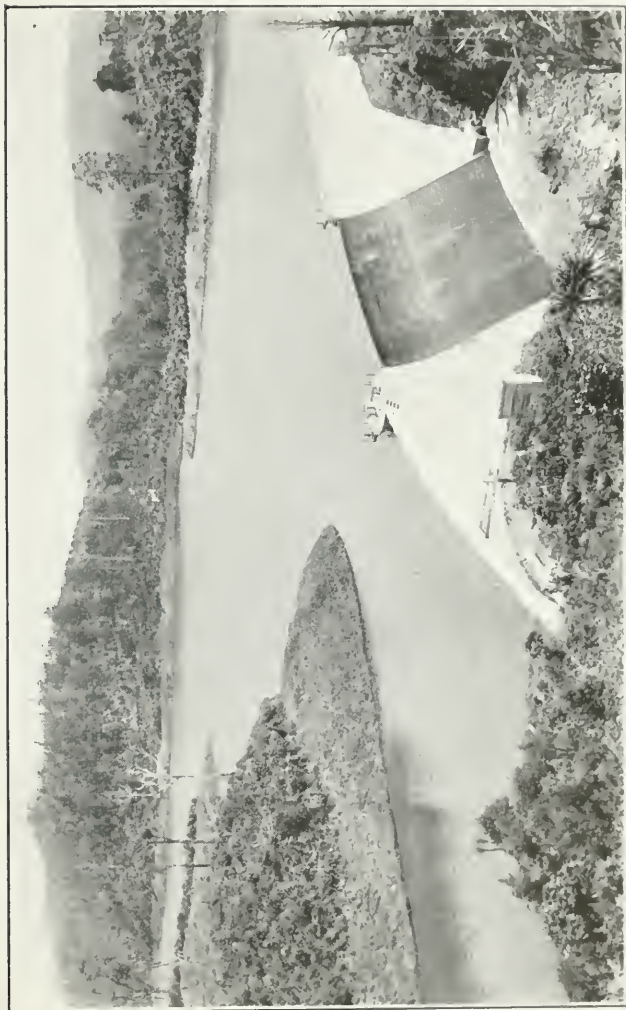
The Bridge was designed and built by the Ferro-Concrete Company of Australasia, Ltd., under the supervision of the City Engineer, the contract price being £31,918. The total completed price was £35,441, while a further £5,000 was spent in acquisition of land and in legal and other expenses.

The main arch consists of two ribs, 6 feet by 4 feet 7 inches at the abutments, 10 feet by 4 feet 3½ inches at the quarters, and 5 feet 6 inches by 4 feet at the centre hinge. The abutment hinges are of cast steel, and are carried on steel girder grids. The total length between the abutment hinges is 315 feet, the rise from the bottom hinge to the central hinge is 84 feet, and the greatest height above the creek 117 feet. Six of the straight girders are of the open type and the remainder solid. There are three girders to the width of the bridge, the two outer being under the kerb line. The footpaths are carried out from the outer girder on cantilevers. The width of the bridge between parapets is 36 feet, of which 21 feet is carriage way, and the remainder, two footpaths of 6 feet each.

It is interesting to note that the total amount of steel used was over 337 tons, and of concrete 5,504 cubic yards.

The Bridge was commenced in 1907, and completed in March, 1910. It was opened for traffic in April of the same year.

On each side of the Symonds Street approach to the Bridge, bronze tablets, with raised lettering, have



WAITAKERE RESERVOIR.

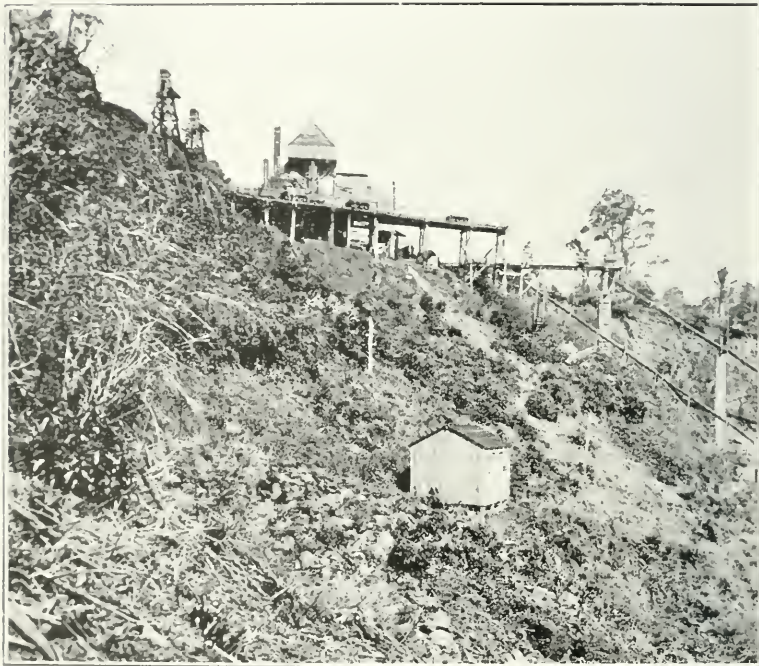
been fixed; the one on the north side being relative to the structure itself, the other designed to commemorate the pioneers whose mortal remains are deposited in the cemetery spanned by the bridge.

RESERVOIRS.

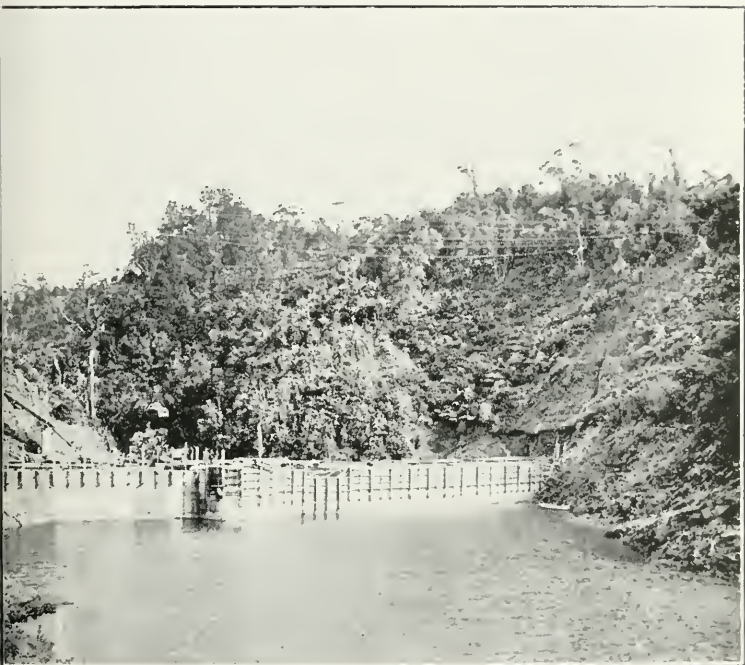
THE WAITAKERE RESERVOIR is situated on the Waitakere Stream, about 14 miles from Auckland. This, the first impounding reservoir constructed by the Council in connection with its gravitation scheme, has a storage capacity of 220 million gallons, and has yielded, with the dry weather flow of the stream, 3 million gallons as its minimum daily supply. The water area of the Reservoir is 64 acres, and the catchment area 2,200 acres. The overflow weir, which is 100 feet long, is situated 580 feet above sea-level and 50 feet above the bed of the stream. The dam is 540 feet in length, and is curved to a radius of 382 feet, measured to the upstream face. The width on the bottom is 231 feet, and at the top it is 3 feet 6 inches. It was completed in 1906, and the cost of construction was £29,600. The Engineer for the work was Mr. H. Munro Wilson, C.E., and the Contractor, Mr. Billington.

The water is brought to the City by a 27-inch diameter steel locking-bar main.

NIHOTUPU RESERVOIR. — On the Nihotupu Stream there are two reservoirs, the upper one holding 60 million gallons, and having a water area of 19 acres and a gathering ground of 1310 acres. The water is



NIHOTUPU (MAIN) DAM, IN C



RSE OF CONSTRUCTION.

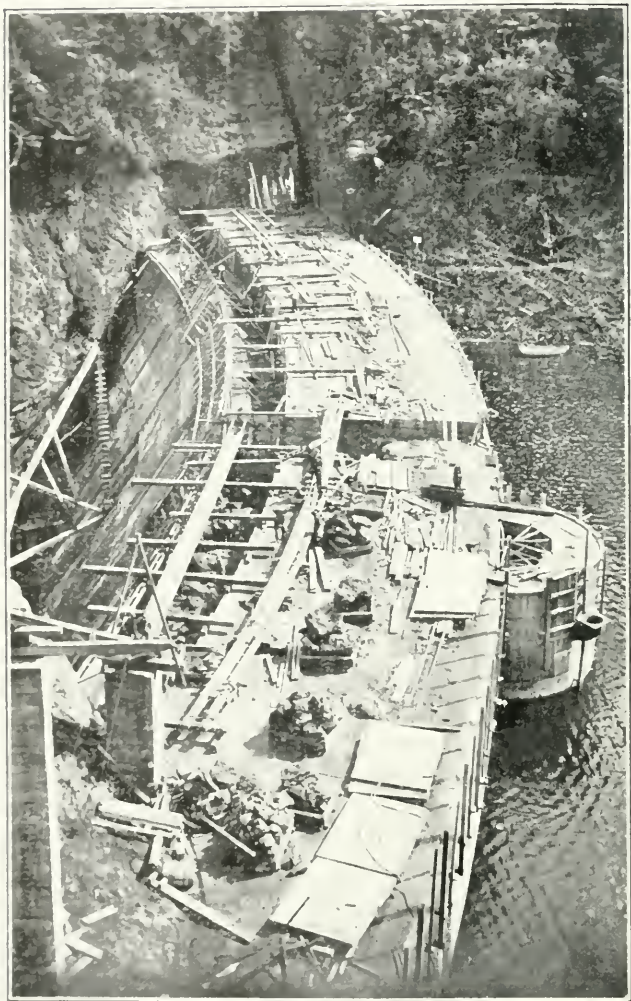
impounded by a reinforced concrete slab and buttress dam, 38 feet above stream level. Its construction was undertaken as an emergency measure, to augment the storage at Waitakere, pending the completion of the Main Dam at Nihotupu, but it will form a permanent portion of the storage system.

The Main Dam is situated over $1\frac{1}{2}$ miles down the stream, at the top of the main falls, where the sides of the river contract, but on account of the comparative steepness of the sides of the valley above, it has had to be constructed to a height of 146 feet from river bed to weir level. The dam, which is designed as a gravitation dam, is curved on plan, the radius being 450 feet, and the maximum length will be, approximately, 540 feet, while the maximum thickness is 104 feet, diminishing at the top to 12 feet. The total quantity of water impounded will be 540 million gallons. The water area of the Reservoir, when full, will be 36 acres, while the total area of the gathering ground is 2,400 acres.

It is expected that the Dam will be completed in the first half of 1923.

It is being constructed of mass concrete, with blue-stone plums or sinkers embedded, and will contain, when finished, upwards of 70,000 cubic yards of concrete.

The Nihotupu Stream, with the two reservoirs above described, is expected to yield a daily supply of 5 million gallons of water.



NIHOTUPU (MAIN) DAM, SHOWING WORK IN PROGRESS.

The construction of the service reservoirs has varied according to the time of their construction, but those more recently erected have been built of reinforced concrete, with vertical walls and reinforced concrete roofs. The service Reservoirs situated at Arch Hill and Khyber Pass have each a capacity of three million gallons, with a depth of 22 feet 6 inches, while a third on Mount Eden has a depth of 15 feet and a capacity of one and a-half million gallons.

CITY MARKETS.

Auckland's first Municipal Markets were situated between Wellesley Street and Cook Street, and were opened in 1873. They were used until 1917, when the first of the two new buildings, situated in Customs Street West, was opened. The old Markets were demolished in 1921.

The present buildings were erected from the designs of the City Engineer, for the purpose of providing accommodation for firms carrying on business as wholesale fruit and produce auctioneers and merchants.

Building No. 1 is of reinforced concrete frame construction, with brick cavity walls, 11 inches thick in panels. The floors are of reinforced concrete, and the roof is of 24-gauge galvanised corrugated iron. The cost of this building complete was £13,000, the actual floor area provided being 38,628 square feet. The main part of the building consists of a basement, ground floor (three feet above street level), first and second

floors; the other portion is an Auction Mart, of one storey.

Building No. 2 is of similar construction, with dividing walls 9 inches thick. The first floor and the middle portion of the ground floor, 70 feet wide, are formed with wooden joists covered with $1\frac{1}{4}$ inch T. & G. flooring, the remaining 56 feet being of reinforced concrete; the roof is covered with 26-gauge galvanised corrugated iron, the principals being of steel, and the purlins of wood. The cost of this building was £35,100, and includes a proportionate cost of back roads, paved with concrete, draughting charges and Clerk of Works' wages. The building, with the exception of "A" portion (which is of three-storey construction) has a ground floor, 3 feet above street level, 14 feet high, and a first floor, 9 feet high to the underside of the beams, the total floor area being 116,016 square feet. In the "A" portion, a cold store was provided at the expense of the firm leasing that portion, but the cost is not included in the above-mentioned figures. It is interesting to note that the Council acquired this site on account of its proximity to the waterfront, and subsequently erected buildings to accommodate, amongst others, those who had been its tenants in the old Market buildings, situated near the Town Hall. By this course, the produce business has been more or less confined to one part of the City, thus reducing cartage to a minimum and preventing traffic of produce to and from the



CITY M



KETS.

markets having to pass through the principal shopping centre, Queen Street, as was formerly the case.

The Contractors for both buildings were Messrs. Fletcher Bros., Ltd.

BATHS AND BATHING FACILITIES.

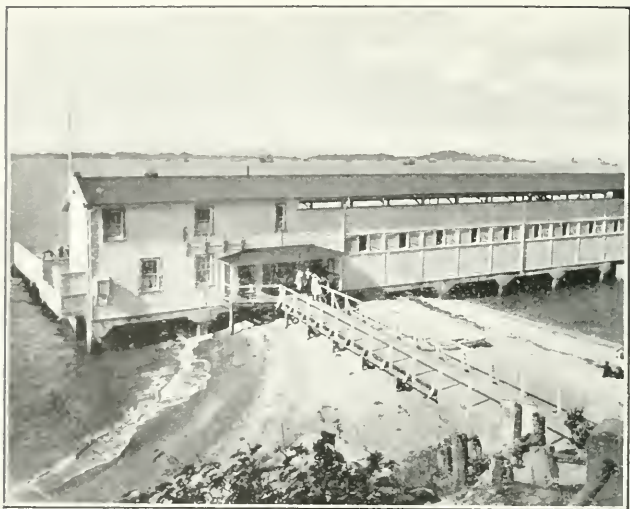
The City Council maintains three large swimming Baths at Ponsonby, Parnell and Hobson Street West, also small bathing sheds on the beaches at the foot of Sentinel Road, Ponsonby, and Victoria Avenue, Remuera.

The use of two Baths, formerly located at Albert Street and Customs Street West, was dispensed with, owing, in the former case to the lack of patronage and in the latter to make room for City improvements.

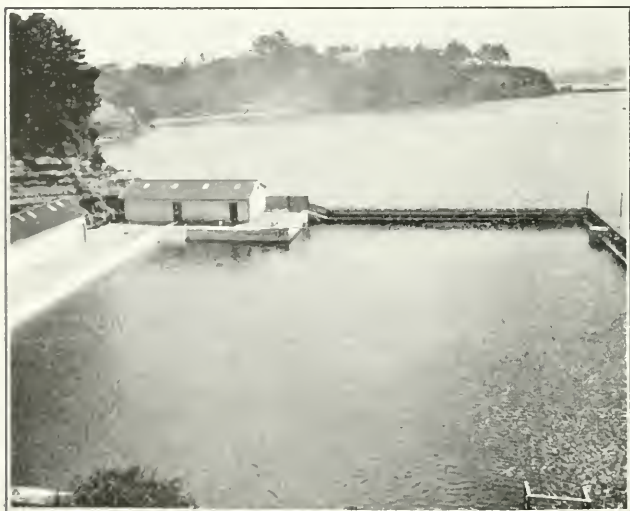
The following is a brief description of the three swimming Baths, which were designed by the City Engineer and erected under his supervision.

SHELLY BEACH SALT WATER BATH, PONSONBY, which is situated on the beach frontage of Point Erin Park, was erected at a cost of £6,500, and was opened on the 23rd November, 1912.

The swimming pool is 150ft. by 60ft., and is surrounded by heavy concrete retaining walls, the floor, which is sloped to form a deep and shallow end, being also of concrete. The water is brought directly from the sea through a valve in the wall.



SHELLY BEACH BATH.



PARNELL SALT-WATER SWIMMING BATH.

On the Park side of the Bath, a building, containing 56 dressing boxes, Caretaker's Quarters and Office, and a commodious grand stand, has been built on a foundation of reinforced concrete piles and beams.

PARNELL SALT WATER BATH was erected on the beach at Point Resolution, and was officially opened on 7th March, 1914. Access is obtained by 141 steps, which zig-zag down the face of the cliff.

The swimming pool is 194 feet long, with a maximum width of 149 feet, and is enclosed by massive concrete walls. The natural sea bed forms the bottom of the bath, providing an average depth of water at ordinary tides of 2 feet to 7 feet. Water is obtained from the sea through sluices in the north wall. A hardwood fence has been constructed on the two seaward walls, to ensure the safety of bathers. Commodious dressing sheds, each equipped with shower baths, for women, men, girls, and boys, are placed on the west, east, and south sides of the pond. Mixed bathing, under strict rules, is permitted. The situation of this Bath renders it suitable for sun-bathing.

HOBSON STREET BATHS are situated at the junction of Customs Street and Sturdee Street, and were erected, under contract, by Messrs. J. T. Julian & Sons, at a cost of £10,673, and were opened on the 17th December, 1914. (See illustration opposite page 90).

The site was formerly a portion of the harbour, and the whole of the building had to be carried on

reinforced concrete piles, driven an average depth of 21 feet.

The building is constructed of reinforced concrete, with panel walls of brick, the pools being entirely of reinforced concrete. The accommodation comprises a swimming bath for men, 100 feet long by 50 feet wide, in a hall 122 feet by 72 feet, with 65 dressing rooms, on top of which is an extensive gallery, capable of seating 450 persons. The women's swimming bath, 60 feet by 30 feet, is in a hall, 52 feet by 57 feet, with 55 dressing rooms. Both pools are lined with white tiles and have sloping floors.

In addition to the swimming baths, there are 9 slipper baths, a caretaker's residence, and a laundry, equipped with washers and driers.

The Baths are provided with tepid salt water, obtained by utilising the return flow from the condensers of the Tramway Department's Power Station, Hobson Street, and the inlets and outlets have been arranged to ensure a continuous passage of water through the baths at all times. About one-third of the roof area over each bath is left open, and provides ample ventilation. Cold water sprays have been fixed on the roof of the men's bath, while shower baths and other conveniences are also available. The slipper baths are provided with hot and cold water (salt and fresh).

MUNICIPAL HOUSING.

The question of providing houses for workmen has at various times received the consideration of Council, but it was not until 1915 that it was resolved to erect six workers' cottages on land belonging to the Council in Clarence Street, Ponsonby. Four of these are designed as semi-detached and two as detached cottages. Competitive designs were invited, and the plans of Mr. T. G. Price were accepted. The accommodation provided for each house consists of 5 rooms, bathroom, wash-house, etc. The total cost, exclusive of land, was £2,264. These houses are let on weekly tenancies, the present rents being £1.

The matter was again under consideration in September and November of 1918, when a scheme was submitted, providing for the erection of 224 houses upon three City sites, at a total cost of £165,855, which included roading in each case, and the purchase of the necessary land. On two of the sites there was already property belonging to the Council.

After careful deliberation, the larger scheme was deferred, but the Council resolved to take steps to erect, on the site formerly occupied by the Abattoir, in Grey Lynn, 79 dwellings, and, with this end in view, applied to the Government for an advance of £50,000 to carry out the proposal. It was ultimately found, however, that £10,000 was the maximum that could be advanced in any one year. This sum was accordingly borrowed from the State Advances Office. After con



WORKERS' COTTAGES, GREY LYNN.

sideration of the various types of cottages, the City Engineer was instructed to erect 10 detached cottages, of five rooms each, on allotments having a frontage on Old Mill Road of 40 feet each and a depth of 140 feet. The houses were designed by the City Engineer.

The erection of these houses was undertaken when the price of labour and materials was at its highest, but, notwithstanding, the Council considered it advisable to construct the houses of permanent material, and for the most part earthenware hollow blocks, 18 inches by 9 inches by 6 inches, were adopted for the outer walls and concrete or brick for the internal walls. The cottages were plastered internally and rough-casted externally. The ten houses were completed at an average cost of £1,100, or, with the land, £1,250, and were sold, with the land, on a rent purchase agreement, £50 deposit being paid, the balance to be paid in half-yearly instalments of £44 1s, extending over a period of 25½ years.

DRAINAGE AND SEWERAGE.

The natural configuration of the older portions of the City made drainage a fairly easy matter, the gullies forming natural water-courses into which drainage could easily be led, and in course of time pipes and culverts were used to carry the drainage to the level of high or low tide.

With the increase of population, the pollution of the foreshore became such as to render some more

suitable method of dealing with the sewage necessary, and, as a result, a comprehensive scheme for the interception of these gully sewers was undertaken and carried to a successful conclusion.

Following this work, the connection of the various City sewers with the main system has proceeded, and the only work remaining to be done is the construction of certain separate sewers on the low levels of the City, the sewage from which will have to be pumped into the Drainage Board's System.

In the older portions of the City, the sewers were made large enough to carry both sewage and storm-water, but in most of the suburban districts, the reticulation of which was carried out prior to their amalgamation with the City, the provision is not sufficient, and various means have to be adopted for dealing with the stormwater. In many cases this is still carried off by the natural water-courses, in others the storm-water is led into caves and vaults in the lava rock, where it ultimately finds an exit into the old water course.

In the City's reticulation system, no less than 191 miles of sewers, varying from 6 inches to 9 feet in diameter, have been laid.

In many of the principal streets the reticulation sewers are laid on both footpaths, to obviate the constant disturbance of the roadway surface, while, owing to the hilly nature of the City, others necessarily have

to be laid in private property at the back of the houses, instead of under the street.

COLLECTION AND DISPOSAL OF REFUSE.

The refuse of the City is collected by the Council's own staff, and conveyed in its own plant to the Destructor or to tips.

In the business portion of the City, the collection is made three times per week; in the inner residential districts twice weekly, and in the outer suburbs once weekly.

The refuse from the outer districts is deposited on tips, and that from the business portion and near-residential districts is taken to the Refuse Destructor, which is situated between Patteson Street and Drake Street, and there burned. Drake Street being at a level 25 feet above Patteson Street, the refuse is tipped into bins and thence into a four-grate Meldrum Patent Simplex Regenerator Destructor.

The Destructor is able to burn, at a maximum capacity, 40 tons of refuse per day of 24 hours, the normal quantity destroyed being approximately 200 tons per week.

The hot gases from the Destructor, before reaching the main flue and chimney, pass through a combustion chamber, and thence to a Babcock and Wilcox Boiler, having 1,966 square feet of heating surface. The steam from this source is utilised in connection

with the forced draught to the furnaces, also in connection with the feed pumps to boilers, and in driving a vertical steam engine used for power in the adjoining corporation workshops. It was formerly more fully utilised as a complement to the boiler power at the Electricity Power Station before the latter was removed to its present site.

QUARRY.

For a great number of years the City's supply of stone for the making and repair of macadamised roads has been principally derived from the Council's Quarry (6 $\frac{3}{4}$ acres), which is leased from the Government Prisons Department, Mount Eden.

The machinery installed consists of:

- 1 Babcock and Wilcox boiler, of 75 h.p.
- 1 Tangye single cylinder steam engine, 14 $\frac{1}{2}$ inches diameter by 25 inches stroke.
- 2 Baxter jaw stone breakers, 20 inches by 16 inches.
- 1 Set of Baxter granulating rolls, together with the necessary screen conveyors, etc.
- 1 Air compressor, 11 inches by 12 inches, which supplies the air for the pneumatic drills.

Owing to the uncertain tenure of the lease, the disposition and arrangement of the plant is not as satisfactory as the Council would desire.

Attached to the stone-breaking plant is a large shed, in which are installed a revolving cylinder for

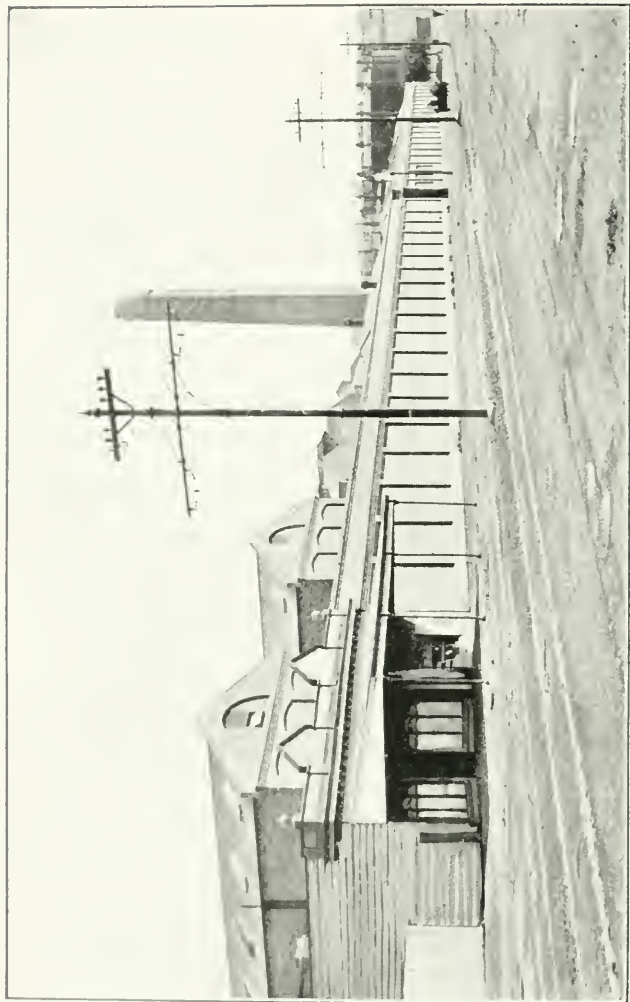
heating stone, tar boilers and tar macadamisers, where tarred macadam, tarred toppings and tarred chips are prepared for Council's street works. All the latter plant is of local manufacture.

The normal output of the Quarry is about 20,000 cubic yards per annum, but it has reached over 30,000 during busy periods.

STABLES.

For the carrying out of the maintenance services, and numerous public works executed by direct labour, the Council keeps, in addition to motors, a considerable number of horses. The horses are stabled at various depôts, the principal one being situated on the Council's property, Patteson Street, where a commodious building, containing two storeys of stalls, with lofts, has been erected, giving accommodation for 93 horses, while six loose boxes are provided for horses that are sick or needing special attention. This two-storey stable is the only one of its kind in New Zealand, although this form of stable is common in Great Britain.

Other stables are situated at Parnell, Remuera and Grey Lynn Depôts of the Council, 102 horses being housed in the central and branch stables. The remaining animals, including those turned out to grass on account of sickness or injury, are distributed in the public parks, at Nihotupu Dam Construction Works and the Council's farm at Harkin's Point. The total number of horses fed is 115.



MUNICIPAL DEPOT, SHOWING DESTROYER CHIMNEY.

The Council's farm at Harkin's Point, some 12 miles up the Harbour, consists of 478 acres, of which all but 100 acres are improved. It was acquired in the first place for the disposal of nightsoil, but that system having been superseded it is now used for grazing and for raising of stock. The average number of stock grazed is from 100 to 130.

CORPORATION DEPOT.

The Council's Main Dépôt, Patteson Street, contains the Main Stores of the City Engineer's Department, workshops for blacksmiths, carpenters, wheelwrights, painters, plumbers, stonemasons' sheds, and offices for overseers, foremen and sewer inspectors, while immediately adjoining are situated the Refuse Destructor and a Dog Pound.

PUBLIC CONVENIENCES.

The Council has erected and maintains twenty-seven conveniences, or comfort stations, five of which are placed underground in different parts of the City, the largest being in Customs Street West, outside the Government Buildings. Thirteen stations are located in the parks

CORONER'S COURT AND MORGUE.

The building serving these purposes was erected within the Hospital grounds in 1912-13, from the designs of the City Engineer, at a cost of £1,616.

The accommodation provided consists of a Court-room, 21 feet by 15 feet, Coroner's Office, Public Waiting-room, and separate mortuaries and post-mortem rooms for general and Hospital purposes.

CEMETERIES.

The Council controls two Cemeteries, one of which is situated in Symonds Street, but, except for the interment of certain blood relatives of those whose remains are buried there, is closed.

This Cemetery contains the mortal remains of Captain William Hobson, R.N., the first Governor of New Zealand, and of many other early pioneers. On its lower slopes still flourish a profusion of tree ferns and other native flora.

The principal Cemetery, familiarly known as Waikumete Cemetery, is situated at Glen Eden, 9 miles from the City by road and 11 miles by rail. It occupies 307 acres, of which some 98 acres have been brought into use, the remainder being put down in grass and planted with trees.

The north-western portion of the Cemetery has been set aside exclusively for the burial of returned soldiers, and at the entrance thereto the Returned Soldiers' Association has erected a fine obelisk of Nelson marble, with Sicilian marble panels, in memory of those who lost their lives in the Great War.

BY-LAW ADMINISTRATION.

The By-laws relating to the erection and alteration of buildings, the control of hoardings, the laying of drains, and other plumbing work, are administered by the City Engineer. The staff consists of the Chief Building Inspector, two Building Inspectors, two Plumbing and Drainage Inspectors, and two Office Assistants, who attend to the issuing of permits, etc., and to other routine business connected with the City Engineer's Department.

The number of permits issued varies considerably, depending largely upon the financial barometer, but is influenced by other causes. The following are the figures for the year ended 31st March, 1921—

No. of permits for the year ...	...	2,046
Building value ...	...	£895,623

As illustrating the progress which has been made, the figures for the year ending 31st March, 1913, are of comparative interest. In that year, 899 permits, for buildings, valued at £399,258, were issued.

The position of City Engineer has been occupied by the following:—Mr. William Anderson, 1871-1899, and Mr. A. A. Wrigg, 1899-1906. The present holder of the office was appointed in the latter year.

W. E. BUSH, M. Inst. C.E.,
City Engineer.



DOMAIN. SHOWING SOURCE OF AUCKLAND'S FIRST WATER SUPPLY.

WATER SUPPLY.

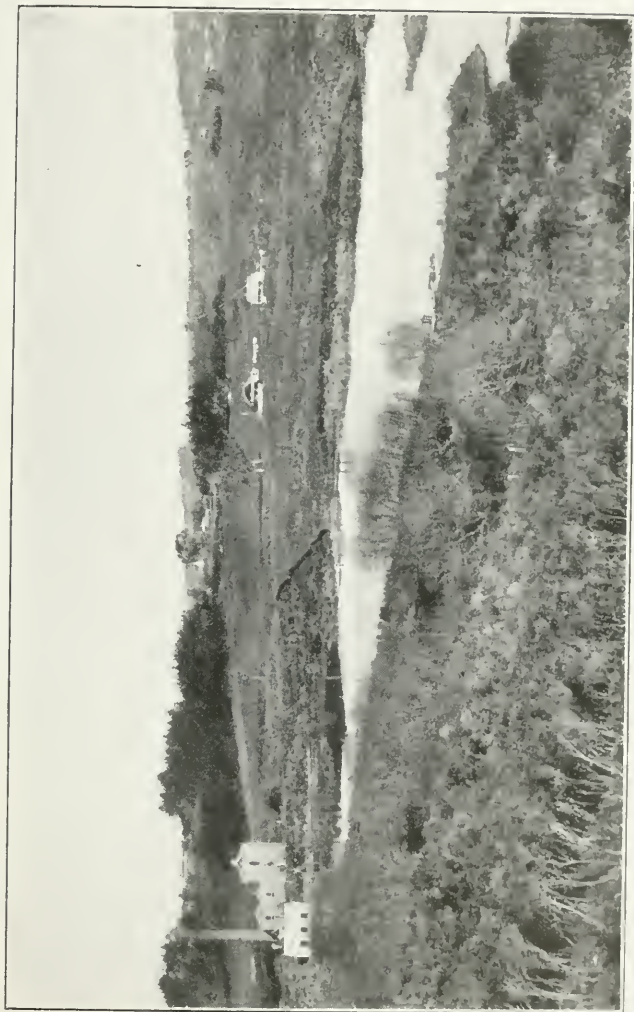
In the early days of the City, the water supply was obtained from storage of rain water, springs, and wells (public and private). The public wells, with pumps attached, were situated as follows. Two were in Queen Street, one nearly opposite Mr. J. H. Dalton, tailor, and the other opposite Hardie's Buildings: one in Albert Street, opposite Masfield's Buildings: and one in Kitchener Street, nearly opposite the Magistrate's Court. There was also a spring in Wellesley Street East, outside the old barrack wall. It is interesting to note that when the asphaltting of Queen Street necessitated the removal of water mains from road to footpath, two of the old wells were unearthed. The new water mains now pass through them.

In those days people had to carry their supplies in buckets from the wells to their homes. The journey to the wells began at 5 a.m., and so great was the demand that queues were formed so that everyone got to the well in turn.

In 1864, an agitation was raised about the difficulty of obtaining water, with the result that the Government instructed the late Mr. Henry Wrigg, C.E., to report on a water supply for the City. Mr. Wrigg recommended a gravitation scheme from Nihotupu, the head works suggested by him being close to the site of the recently constructed auxiliary dam. Nothing was done in connection with the report, and the old state of things

continued until 1869, when the Government laid a 6-inch main from the small lake in the Domain to the City, *via* Domain Street, Abercrombie Street and Wakefield Street; stand pipes being erected at various points *en route*. Still the supply was inadequate, and in January, 1872, owing to a drought, water was sold in the streets by hawkers, and resulted in the City Council augmenting the Domain supply by pumping 30,000 gallons per day from Seecombe's Well, Khyber Pass Road. Even with this addition, the supply was still meagre, and only fulfilled the mere necessities of living. There was no surplus for public or private baths, for garden or street watering, and, worse still, for fire-fighting—all of which are to-day regarded as essentials.

In 1874 the Corporation secured the services of Mr. E. O. Moriarty, C.E., to report on a water supply. After inspecting the Onehunga Springs, Nihotupu, Lake St. John and Western Springs, he finally recommended, without hesitation, the latter, expressing his opinion in the following terms:—"Taking the present population of the City, and those parts of the suburbs likely to be dependent on the City for water at 20,000 persons, one million gallons per day would be a liberal allowance at 50 gallons per head per day, but if manufactories are to be established and shipping to be supplied then 75 gallons per head would be a safer estimate, and looking at the peculiarly favourable position of Auckland and to the probability of its becoming a great



WESTERN SPRINGS PUMPING STATION.
(Superseded by gravitation supply from Waitakere.)

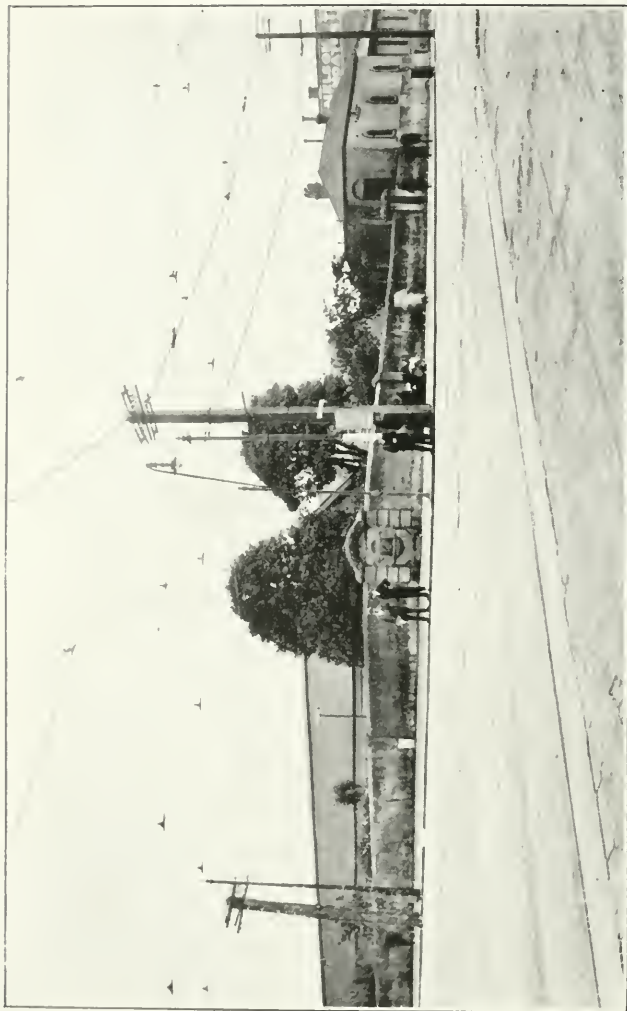
centre of commerce, there seems every reason to anticipate that within the next ten to fifteen years the population will be doubled, and the demand for water proportionally increased."

Mr. Moriarty's opinion of the future of Auckland, both as regards population and commerce, has been fully proved. His report on the Western Springs was adopted by Council, which purchased Motion's property for £20,000, and work was commenced in 1875, Messrs. T. & S. Morrin being the successful tenderers for the supply of pipes, machinery, and the whole of the work of reticulation. The undertaking, which was supervised by Mr. W. Errington, C.E., was completed in July, 1877, when the water was turned into the City reservoirs.

Mr. Moriarty's estimate that the Western Springs supply would serve the City for 25 years from the date of his report, was also shown to be correct, as in 1899 it became evident that an auxiliary supply must be obtained for summer consumption, to meet the requirements of the rapidly growing city. At this time, Mr. H. Munro Wilson, C.E., and the late H. W. Atkinson, suggested the possibility of obtaining an auxiliary supply from Nihotupu (running water only), carried along the southern side of the dividing range. This scheme was approved by the Council, and in May, 1900, an additional supply of one million gallons per day was turned into the City reservoirs. For two months before the new supply became available the citizens had

been placed on short rations, the water being turned off nightly at 6 p.m. and not turned on until 6 a.m. the following morning.

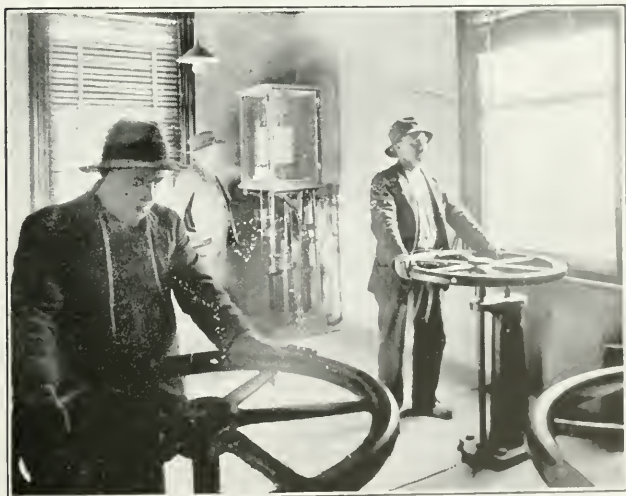
This auxiliary supply, with extensions, was subsequently adopted as the second part of a threefold scheme of water supply from the Waitakere Ranges. In 1902, acting under instructions from the Council, Messrs. H. Munro Wilson, C.E., and J. Carlaw (Waterworks Engineer) reported on a scheme of water supply from the Waitakere River, which made provision, by the erection of a dam, for the impounding of 220 million gallons of water, and two years later the Council engaged the services of Mr. Mestayer, C.E., of Wellington, to report on Messrs. Wilson and Carlaw's scheme and the question of further extension. He endorsed the report of the latter and, in addition, recommended the erection of a dam on the Nihotupu River, now under construction, and, when necessary, a further extension to the Huia. The water from Waitakere was turned into the City mains in 1906, and this, together with the running water from Nihotupu, is now supplying 107,000 people with 56 gallons per head per day. When the dam on the Nihotupu River is completed the available storage will be 840 million gallons. In order to preserve the purity of the water, the City Council controls over 10,000 acres of land in the ranges, embracing the watersheds of Waitakere, Nihotupu, and Huia. A portion of this land was purchased, but the greater part was obtained from the Government, which vested it as a domain in the City Council.



PONSONBY RESERVOIR.
The buildings on the right are the workshops.



A CORNER OF THE WATERWORKS SHOP.



"VENTURI" METER AND VALVES.

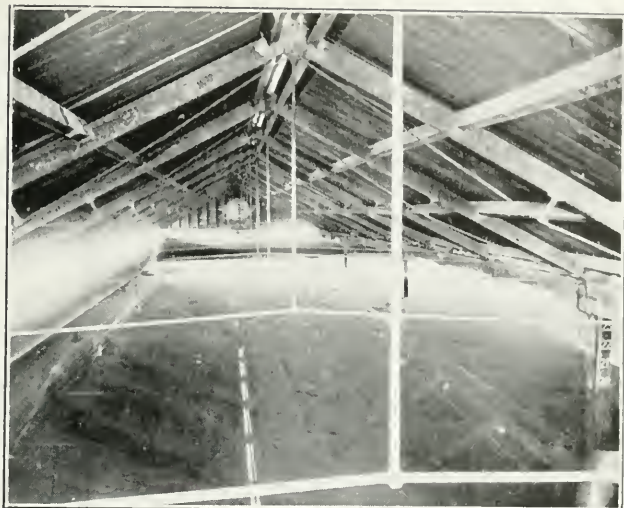
The whole of the water is gravitated from Nihotupu and Waitakere into service reservoirs at Khyber Pass, Arch Hill and Ponsonby. The water for the higher levels is raised by means of electric motors from Khyber Pass to Mount Eden Reservoir, and from there part of the supply is gravitated to Mount Hobson Reservoir, which serves Remuera and Tamaki West districts.

The increase of the persons supplied with water has been fairly regular during the past twenty years, as shown hereunder :—

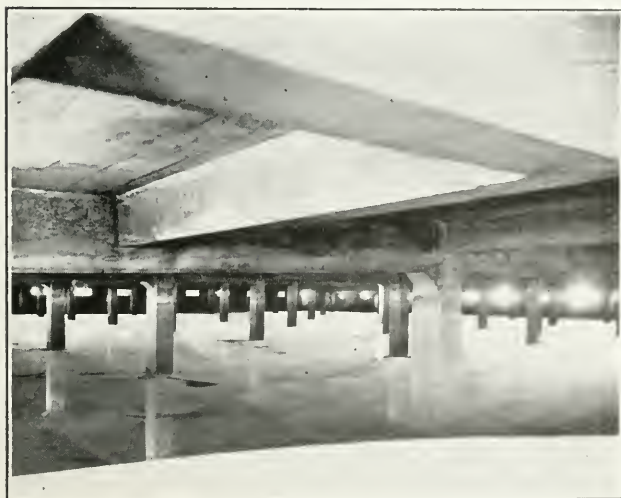
Date.	Population supplied with water.	Increase.
1900	52,000	-----
1905	62,000	10,000
1910	75,000	13,000
1915	94,000	19,000
1920	107,000	13,000

Total increase, 55,000 or over 100%
in 20 years.

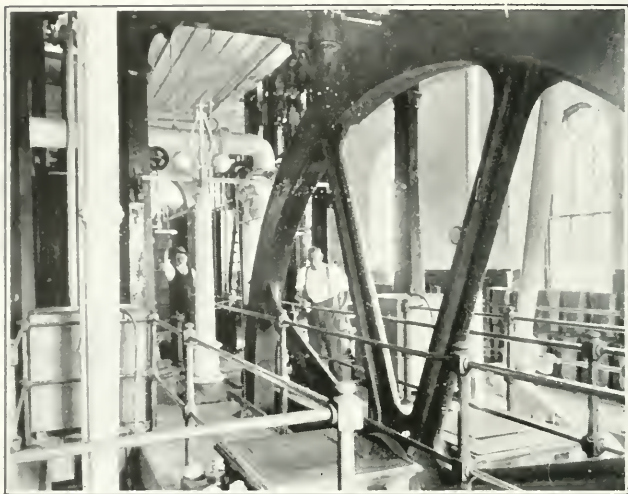
In addition to the natural growth in population of the City proper during the last twenty years, Arch Hill and Parnell, with a united population of 7,969, amalgamated with the City, in 1913; Grey Lynn, with 8,000, in 1914; Eden Terrace and Remuera, with 7,877, in 1915; and Epsom, with 3,000, in 1917, being a total addition of 26,848. All the districts named, with the exception of Epsom, were supplied with water from the City mains at the time of amalgamation.



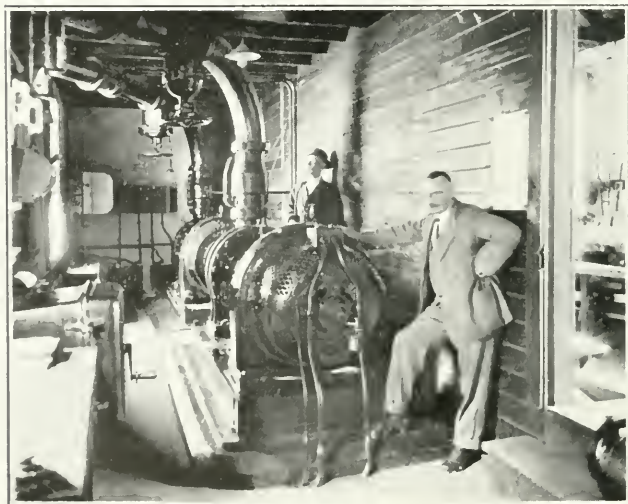
INTERIOR OF OLD TYPE OF SERVICE RESERVOIR.



INTERIOR OF NEW TYPE OF SERVICE RESERVOIR



PUMPING STATION, WESTERN SPRINGS.



PUMPING STATION, KHYBER PASS.

The service reservoirs, seven in number, are situated at Arch Hill, 232 feet above H.W.M. ; Ponsonby, 232 feet above H.W.M. ; Khyber Pass (two reservoirs), 316 feet above H.W.M. ; Mount Eden (two reservoirs), 498 feet above H.W.M. ; and Mount Hobson, 484 feet above H.W.M., having a total capacity of 15 million gallons. The gravitation mains are 25 miles in length, and consist of 7 miles of 27 inches diameter, 9½ miles of 24 inches, 2½ miles of 21 inches, 3 miles of 20 inches and 3 miles of 18 inches. The reticulation mains cover 158 miles and vary in diameter from 12 inches to 4 inches.

The capital invested in the undertaking is £715,211 12s 7d, and the gross revenue £73,534 1s 3d. The average ratio of management expenses to revenue is 16%. The capita consumption is 56 gallons, which compares very favourably with any city in Australasia.

CHARGES.

Ordinary domestic supply, up to £100

rental value	..	..	..	2½%
Thereafter	..	..	..	2%
On non-residential properties	..	..	..	1%
Non-consumers rate	..	..	..	4%

W.C.'s.—In private house for the first two 15/- per annum

For each additional closet after first two 7/6 per annum

Hotels or lodging houses 50/- to 60/- per annum

Baths, in private houses Free

„ in hotels, lodging houses, and boarding houses 15/- to 50/- per annum

Lavatories 10/- to 20/-

AUCKLAND MUNICIPAL HANDBOOK.

Water by Meter,	ordinary	.. ..	10d per 1000 gallons
.. ..	in bulk to outside dis-	tricts	1/-
.. ..	to individual supplies	outside City and to	Government buildings
.. ..	Harbour Board (ship-	ping)	2 3
.. ..	Primary schools, up to	500 gallons per child	per annum
.. ..	in excess of that quantity	for concrete, 3d per cubic	yard or
.. ..	for bricks, 6d per 1000 or	.. ..	1/6
Garden Hose,	for an area under $\frac{1}{4}$ acre	.. ..	£1 per annum
.. ..	over $\frac{1}{4}$ acre and under $\frac{1}{2}$ acre	.. ..	£1/10/- per annum
.. ..	over $\frac{1}{2}$ acre	.. ..	£2/- -, or by meter,
			10d per 1000 gallons

The office of Waterworks Engineer was created in 1899, when the present Engineer was appointed. Prior to this date consulting engineers were employed by the Council. Mr. W. Errington, C.E., was engaged in this capacity from 1875 to December, 1888, and W. Anderson, City Engineer, from 1889 until 1899.

J. CARLAW,
Waterworks Engineer.

ELECTRICITY.

The City Council first sanctioned an electric supply in the year 1903, in accordance with a report presented by Mr. W. G. T. Goodman.

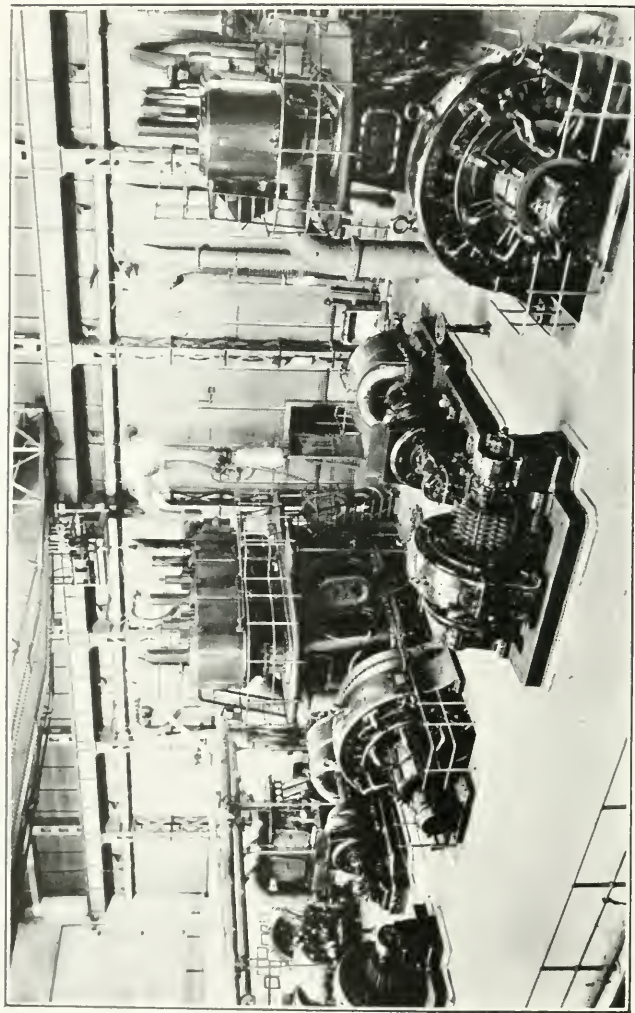
It was decided to establish the works at Freeman's Bay, in order to take advantage of a certain amount of steam supplied by the Destructor.

The first proposal involved an expenditure of £21,000, and the Council applied for a loan of £25,000.

In 1907, Mr. A. Wyllie was appointed Electrical Engineer, and in February, 1908, the first supply was given from Freeman's Bay.

It was soon manifest that the demand would exceed the first expectations, and it became necessary to raise a further loan of £50,000, in order to increase the area of reticulation and the capacity of the Power Station. It was also evident that the Destructor site was unsuitable for meeting the demand of the future, and that the Power Station at Freeman's Bay was altogether inadequate.

In 1909, Mr. Wyllie presented a report recommending the building of a new and much larger Power Station at King's Wharf. This scheme involved an expenditure of £225,000, and after careful consideration was adopted by the Council.



ELECTRIC POWER STATION: GENERATORS.

A water front site of nearly four acres at King's Wharf was acquired at a cost of £33,000. This was suitably situated for obtaining supplies of coal by rail and sea, and furnished an abundant supply of circulating water.

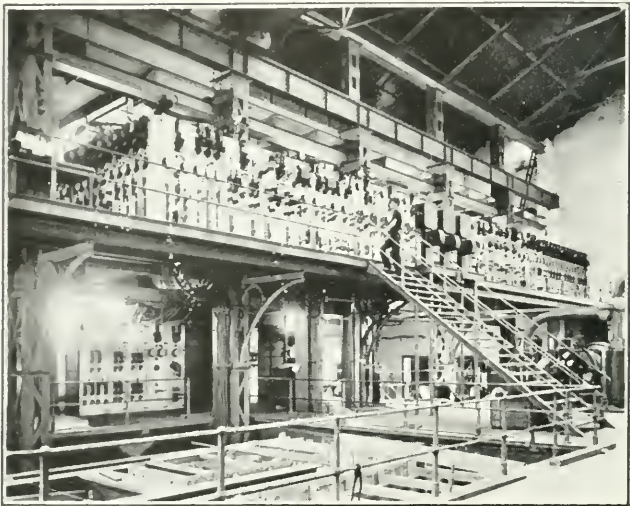
The Power Station at King's Wharf was put into operation in February, 1913, and the Freeman's Bay works were closed down.

The system of supply recommended by Mr. Goodman was three-wire direct current, with 160 volts between the outer wires. This was retained at the King's Wharf Station, to deal with the central City area, and provision was made for adding a high tension three-phase alternating current supply at 6,600 volts to deal with the outer areas. The capacity of the first installation at King's Wharf was 3,000 kilowatts.

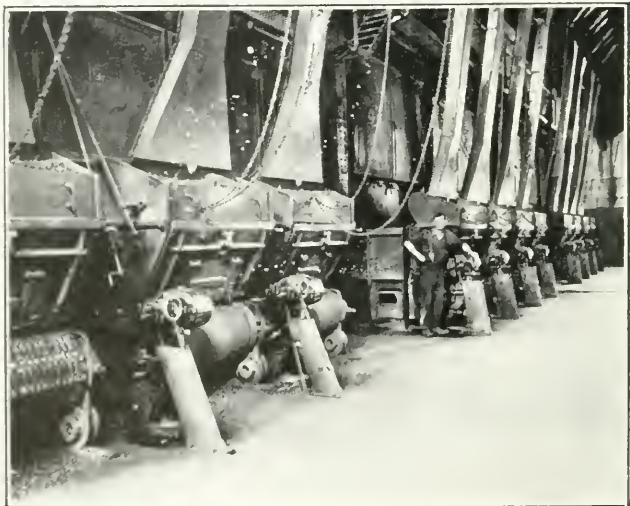
In 1914, contracts were entered into for adding 2,200 kilowatts of direct current and 1,500 kilowatts of alternating current supply. Owing to the outbreak of war, these contracts were not finally completed until 1920.

From the beginning, the Council has steadily increased its area of operation.

In the year 1920, on the recommendation of Mr. Wyllie, it was decided to further increase the capacity of the King's Wharf Power Station by 13,000 kilowatts of alternating machinery, in order to provide sufficient power to combine the whole of the electric supply of



ELECTRIC POWER STATION: SWITCHBOARD.



ELECTRIC POWER STATION: BOILER ROOM.
Showing Automatic Stokers.

Auckland, including the supply to the tramways, in a single Power Station. The tramways had, in the previous year, become the property of the Council, and it was considered more efficient to have a single Power Station than to continue supplying the Tramways Department separately from its own Power Station in Hobson Street.

The Tramways Department Power Station, Hobson Street, was, in certain respects, out of date, and was unfavourably situated for extension. It was already overtaxed, and for over six years had been receiving help from the City Council Power Station at King's Wharf.

It was decided to convert the Hobson Street Power Station into a sub-station and establish a further tramway sub-station at Kingsland. These extensions involved a capital expenditure of £500,000.

The capital expenditure on the King's Wharf Power Station, and on reticulation, up to 31st March, 1921, was £506,000.

Two sub-stations are supplied from King's Wharf—one in Epsom, which was started in 1915, and one at Grey Lynn, started in 1920.

About ten miles of streets are now lit by electricity, and the Council contemplates considerable extensions of its street lighting system.

The total number of units sold for the year ended 31st March, 1921, was 10,496,060. Of this, 3,552,333

units were supplied for lighting and the balance for power.

The total revenue for the same year was £108,734, the working expenses £67,932, and the profit for the year's operation £17,080.

A Power Board has been formed under legislation of 1921 to control the electric supply of the whole Auckland isthmus. The City Council and the representatives of all the other authorities concerned signed an agreement, by which the City sold the whole of its electrical undertaking to the Board, and this was validated by Parliament.

The first Auckland Electric Power Board elections were held on February 28, 1922, and the first meeting of the Board took place in the Auckland City Council Chamber on March 16th, when Mr. W. J. Holdsworth was elected chairman.

ALEX. WYLLIE,
Electrical Engineer to Power Board,
(Formerly City Electrical Engineer).

TRAMWAYS.

Auckland's first tramways were conducted by the St. Heliers and Northcote Land Company, Ltd., which entered into an agreement with the City Council for this purpose on January 11th, 1883. By an Order-in-Council, dated 9th October, 1883, under the "Tramways Act, 1872," the construction of tramways in Auckland, Parnell and Newmarket was authorised. The first tramway to be completed was the line from the Waitemata Hotel, by Queen Street, to the Ponsonby Reservoir, and the trams, which were horse drawn, commenced running on August 11th, 1884: the fare being threepence.

In 1886, the St. Heliers and Northcote Land Company, Limited, changed its name to the City of Auckland Tramways and Suburban Land Company, Limited, and the latter, as promoters of the Auckland City and Suburban Tramways, obtained further Orders-in-Council for certain extensions of the existing tramways. The Auckland City and Suburban Tramways Company, Limited, did not prosper, and owing to financial difficulties its assets passed to the Bank of New Zealand. Further transfers of the interest in the Auckland Tramways took place from time to time until it rested in the Auckland Electric Tramways Company, Limited, which was registered in London on the 22nd March, 1899.

The capital of the Auckland Electric Tramways Company, Limited, at its inception was £150,000, divided

into 15,000 shares of £10 each, and, in 1907, each existing ordinary share of £10 was split into 10 shares of £1 each. From time to time the capital was increased until it eventually stood at £600,000, divided into 150,000 6 per cent. cumulative preference shares and 450,000 ordinary shares, all of £1 each. In addition first mortgage 5 per cent. debenture stock was issued to a total of £135,100.

In due course the Auckland Electric Tramways Company, Limited, made agreements with the Auckland City Council, the Boroughs of Parnell, Grey Lynn, Newmarket, Onehunga and Mount Eden, and the Road Districts of Remuera, Mount Roskill, Epsom, One Tree Hill, Eden Terrace and Mount Albert for the construction of electric tramways in their respective districts. The "Tramways Act, 1908," provides that an order authorising the construction of tramways in any district can only be obtained by the Local Authority thereof on application to the Governor-in-Council, consequently all Orders-in-Council having reference to the tramways in Auckland City and suburbs are vested in the Local Authorities. The Act also provides for a Local Authority to grant a lease of a tramway constructed, or ordered to be constructed under the Act, and consequently during the regime of the Auckland Electric Tramways Company, Limited, that Company's powers regarding the tramways in Auckland were defined by certain deeds, executed by the Local Authority which delegated to the Company certain rights, privileges, etc., contained in

Orders-in-Council previously obtained by the Local Authority.

The first breaking of the ground in connection with the laying of the permanent way took place on 1st August, 1901, and on the 17th November of the following year the electric trams were formally inaugurated. The opening proceedings commenced at 12.30 p.m. at the Power House, where a large number of representative citizens assembled as guests of the Auckland Electric Tramways Company, Limited. After an inspection of the machinery contained in the building, the Mayor of Auckland (Mr. Alfred Kidd), accompanied by Sir John Logan Campbell, the Town Clerk (Mr. H. W. Wilson), and others, ascended the switch board platform, and at the request of the Company's attorney, the Mayor of Auckland switched on the electric power. On leaving the Power House the guests proceeded to Lower Queen Street, where six electric tramcars waited in readiness to convey them to a luncheon in the Choral Hall. Sir John Logan Campbell started the first car, after receiving from the Town Clerk a handsomely bound motor-man's license.

It was intended to start the public service the following day, the 18th November, 1902, but owing to the wreck of the S.S. *Elingamite*, in which some motormen, who were being brought from Sydney, were drowned, the opening was delayed until the 24th November, 1902, when the route from the City to the Three Lamps, Ponsonby, *via* Karangahape Road, was opened for

public traffic. The other sections of the tramways were opened at intervals.

The Electric Tramways Company, Limited, was a successful undertaking, and paid its first dividend of 4½ per cent. for 1903, followed by 6 per cent. for 1904, 7 per cent. for 1905 and 1906, 6 per cent. for 1907, 1908, 1909 and 1910, 7 per cent. for 1911, 7½ per cent. for 1912, 1913, 1914, 1915, 1916, 1917 and 1918, and 5 per cent. for 1919.

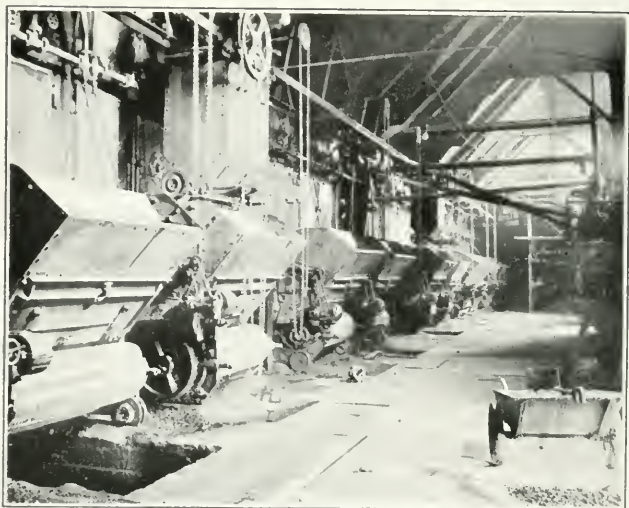
Negotiations for the purchase of the electric tramways by the Auckland City Council commenced in February, 1919, but as the Company's tenure of the City lines did not expire until the 1st June, 1932, the City could not take advantage of the clause providing for purchase in the Deeds of Delegation. This clause made provision for the Local Authority to purchase the Tramway system at the expiry of the term of concession on the basis of its value as a going concern, but not including any sum for goodwill. In the case of a dispute as to the price to be paid, the question was to be submitted to the arbitration of three indifferent persons, one to be chosen by each of the parties, and the third to be named by the two persons first chosen, the arbitration to be conducted in Auckland conformably to the provisions of the "Arbitration Act, 1890." Provision was also made for the Local Authority to purchase before the expiry of the term of concession, but no terms could be laid down as in such case the Company could not

be required to sell except on such conditions as might be mutually agreed upon between the parties.

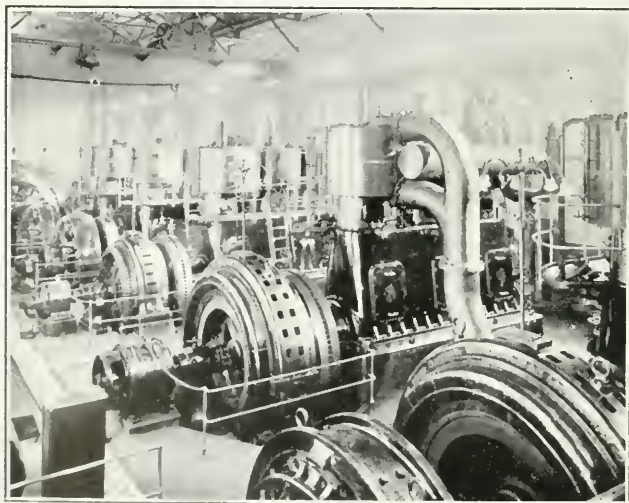
The negotiations for purchase had therefore to proceed on the lines of mutual agreement. In continuance of the negotiations for purchase a valuation report of the tramways was obtained from Mr. William Ferguson, M.I.C.E., M.I.M.E., and under date of the 2nd April, 1919, an option-of-purchase was entered into between the Company and the Council, possession to be given on the 1st July, 1919, in the event of the Council exercising the option. The option-of-purchase was eventually exercised, and the City entered into possession on the date mentioned. The purchase price was £1,227,201 8s 7d. The amount was paid in Debentures of the Corporation, having a currency of 21 years from 1st July, 1919, £392,800 bearing interest at 5 per cent., and the balance at $5\frac{1}{4}$ per cent. By the purchase the Corporation secured the whole of the electric tramways in the City and suburbs of Auckland, together with all the lands, buildings, works, machinery, material and plant of the Company used by it for the purpose of its tramway undertaking, or in transit to it, at the date of possession, and further all assets, contracts and engagements in connection therewith.

POWER STATION.

This is situated in Hobson Street, the area of the property being 3.375 roods. The original plant consisted of three horizontal compound engines, each direct



TRAMWAY POWER STATION: BOILER HOUSE.



TRAMWAY POWER STATION: ENGINE ROOM.

coupled to a 300 K.W. direct current generator, steam being supplied by four Babcock and Wilcox water tube boilers. From time to time additions have been made, comprising eight boilers and the following generating plant:—Two 600 K.W. direct current sets, one 600 K.W. and three 1,000 K.W. alternating current sets, together with the requisite auxiliary plant and standard switch gear.

The boilers are fitted with automatic chain grate stokers and superheaters, and the gases from them pass through two Green's Economisers to two steel chimneys 125ft. high, lined with concrete and brick.

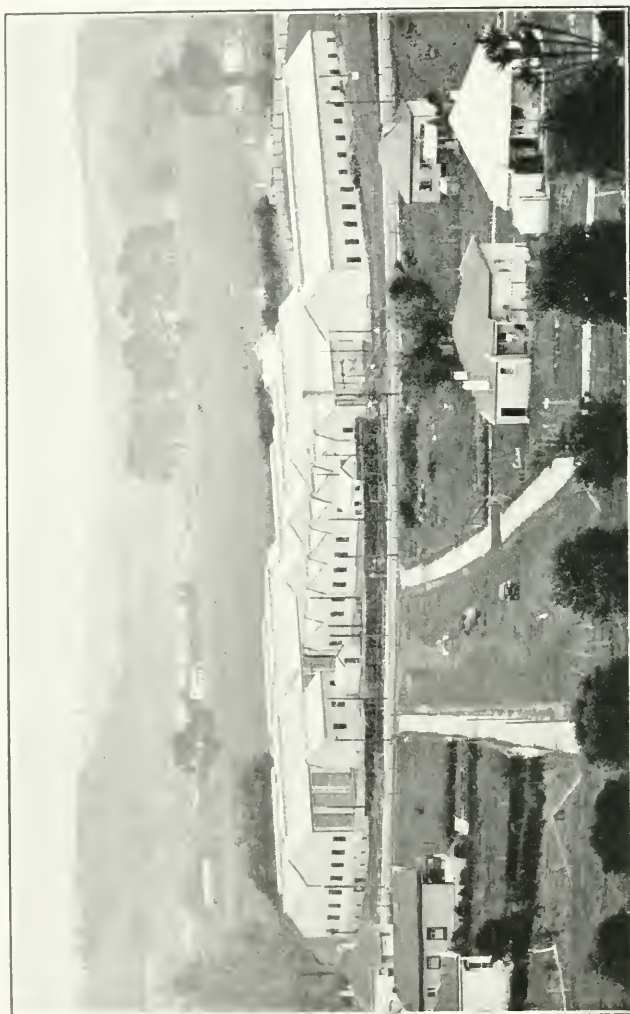
Coal is handled by means of a conveyor driven by electricity.

The engines exhaust into surface condensers, the circulating water for which is drawn from the harbour at Hobson Street Wharf by four motor-driven pumps, installed in a building opposite the Hobson Street Baths. The water after passing through the condensers and becoming heated is used in the baths before its return to the sea.

The total capacity of the power station is now just under 6,000 K.W.

The number of units generated for the year ended 31st March, 1921, amounted to over thirteen million.

A sub-station has been erected at Green Lane, off Manukau Road, to which power is transmitted at a voltage of 5,500 and distributed, at the ordinary voltage



TRAMWAY WORKSHOPS.

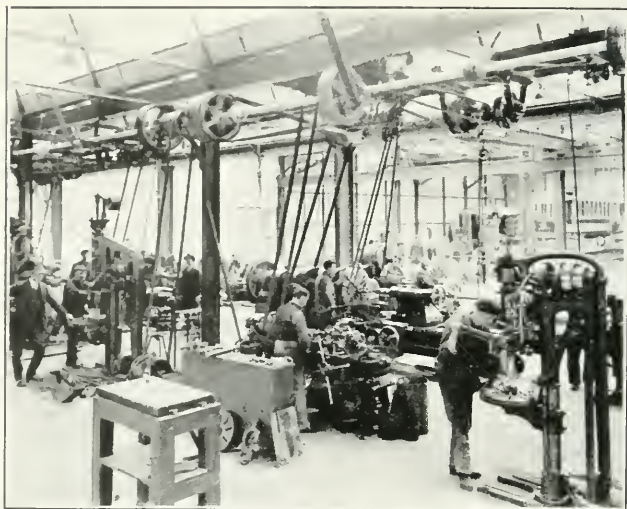
of 550, to the tramway routes in the adjacent area. The plant consists of four 500 K.W. motor generators, together with a starter set, two negative boosters and standard alternating and direct current switch-gear.

WORKSHOPS.

The Department's workshops, which were completed in 1914, are situated in Manukau Road, near Royal Oak, and cover an area of two acres in a property six acres in extent, there being a wide margin for extensions. The buildings are constructed of galvanised iron, the supporting columns and roof trusses being of steel, and the foundation of concrete. They are lofty, well ventilated and lighted, both naturally and artificially, and are practically fire-proof. The ground not used for buildings has been tastefully laid out in lawns, with flower beds and ornamental shrubs and trees.

The work carried on here includes the complete overhaul and repair of cars, rebuilding, renewal, painting, and the manufacture of parts required by the Department.

The lay-out is compact, and has been rendered possible by the use of an electrically driven traverser, which allows of a car being transported from the workshops siding to any one of the 24 tracks in the repair, wood working and paint shops. In addition to the shops just mentioned there are the machine, electrical and



TRAMWAY WORKSHOPS: THE MACHINE SHOP.



TRAMWAY WORKSHOPS: GENERAL STORE.

blacksmith shops. The following is a brief description of the work carried out in them.

Repair Shop.

Here the car body is lifted from the trucks by means of chain blocks on an overhead runway. The trucks are then run out from under the car to the tracks spanned by an electric crane, which does all the necessary lifting and transporting of the parts preparatory to repair and overhaul.

Machine Shop.

In this shop is installed a complete and up-to-date equipment of machines for carrying out repairs and renewals to the cars and plant generally, also machines for the making of new parts and the turning of car wheel tyres.

Wood-working Shop.

In this shop cars are rebuilt, wholly, or, in part, as required, and all necessary repairs are effected.

Paint Shop.

This is where cars are repainted and varnished.

Electrical Shop.

The different parts of the car motors are here repaired and rewound.

Blacksmiths' Shop.

In this is installed a complete plant for dealing with the various classes of forging work required in tramway

working. A number of ingenious machines for making use of old material and saving manual labour have been installed and found to be of great service.

Stores.

In close proximity to the repair shops are the stores where over 5,000 different material items used in the upkeep and running of the tramways are stocked. Oil is kept in a small building isolated from all the others. Tram rails are stacked in the open. Wood, bitumen, and other stores are kept underneath the paint and wood-working shops.

OVERHEAD CONSTRUCTION.

There are three types of construction:—Centre pole, side pole, and span. The poles are made of steel or of wood (totara and Australian iron bark). The trolley wires are mostly 3/0 S.W.G. hard drawn copper, but experiments have recently been carried out with Phono electric wire.

FEEDERS.

The trolley wire is divided into a number of sections, each of which is fed from the Power Station or Substation. The feeders comprise vulcanised bitumen and lead-covered cables, some laid solid in bitumen-filled earthenware troughs, and others drawn into conduits, and also of 1/0 B and S bare copper wires fixed on the poles which support the trolley wires.

The high tension cables which supply the sub-station are lead covered and armoured. They are partly drawn into conduits and partly laid solid in bitumen-filled earthenware troughs.

CONTROL AT JUNCTIONS.

At the corner of Queen and Wellesley Streets a signal tower was erected, in 1916, from which all track points and semaphores at this 4-way junction are electrically controlled. At all other junctions, eleven in all, the track points are electrically operated by means of contactors on the trolley wires, and to enable trolley wheels to follow the right course, boom frogs, operated by the car trolley poles, are installed in the overhead wires.

TOWER WAGGONS.

Three motor tower waggons are in daily use for the examination, repair and renewal of the overhead wires and fittings. The Dépôt in connection with this department is situated at Newton Road, near the top of Symonds Street. An emergency man is always on duty here, and, on account of the central position, he can reach the scene of a breakdown in the shortest of time.

CAR SHEDS.

There are two sheds for the depôtting of cars, one situated at Jervois Road, Herne Bay, and the other at Manukau Road, Epsom. The tracks in the car sheds



EPSOM TRAM DEPOT.

are provided with pits to enable the trucks and under gear to be examined. All running repairs and cleaning are effected in these two car sheds, most of the work of necessity being carried out at night. A few machine tools are installed at each car shed for the carrying out of small repair work.

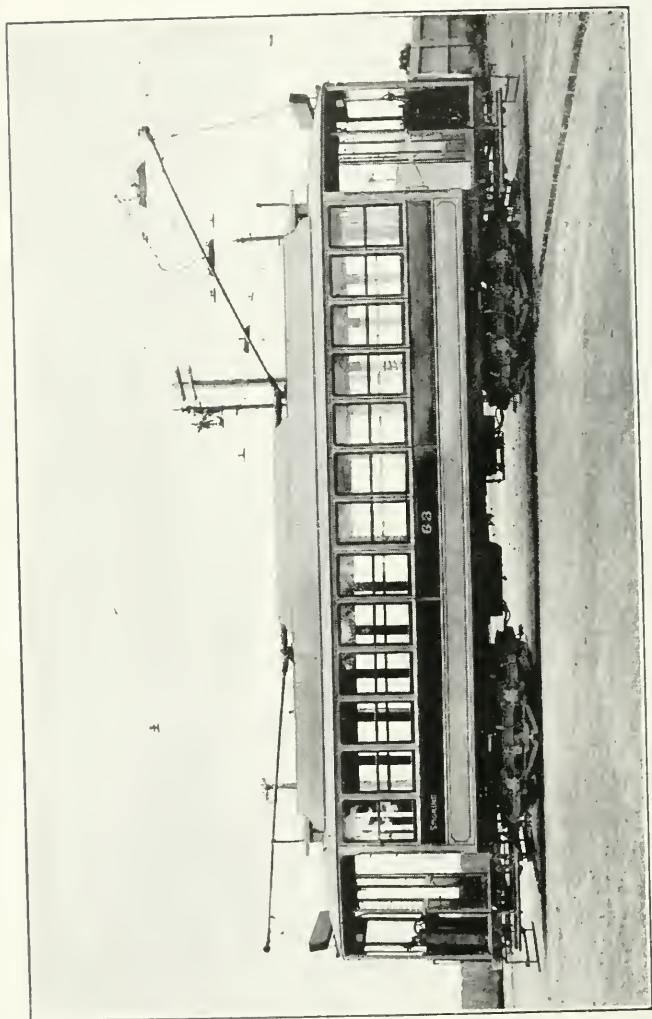
ROLLING STOCK.

The number of passenger cars at the present time is 169. Of these 24 are of the four-wheeled type, coupled in pairs, each with a seating capacity for 56 passengers; 108 cars, with seating for 52 passengers, are of the vestibule composite type, equipped with bogie trucks, and the majority with two 50 h.p. motors. The remaining 37 are of various types, including six double-decked cars. All the cars are fitted with glass fronts, to afford protection from the weather, and with three types of brakes—an air and a hand brake to operate on the wheels, and a slipper brake to operate on the rails. The construction of ten new passenger cars has been authorised.

In addition to the passenger cars there are two freight cars used for the carriage of material between the stores and depôts.

PERMANENT WAY.

The total length of line measured as single track is 51.65 miles, made up of 3.37 miles of single track and 24.14 miles of double track. The gauge of the track is



TYPE OF TRAM.

4ft. 8½in. In the original construction the rails were carried on longitudinal concrete stringers, but in 1904 this method was changed to hardwood cross sleepers, 8ft. x 9in. x 4½in., 2,640 being used to the mile of track.

The first tracks were laid with 92lb. girder rails, but owing to these being found too light for a heavier type of car subsequently used, girder rails weighing 110lbs. per yard (116lbs. on curves) were substituted, in 1913, for all renewal and extension work.

Owing to the unstable nature of the ground in Queen Street, recurring trouble was experienced up to the year 1913, when a complete reconstruction was carried out and the tracks relaid on a pile foundation. Track to the extent of 5,541 square yards is paved with Neuchatel asphalt, 43,308 square yards with bituminous macadam, and the balance with water bound macadam.

The steepest grade is one in 8.77, and the sharpest curve has a radius of 53ft.

STAFF.

In March, 1922, the tramways staff numbered 895, viz :—

Traffic	...	...	...	...	458
Permanent Way	...	...	...	...	129
Overhead	.	...	...	...	19
Power Station	...	...	...	...	49
Car Repairing	..	...	...	...	186
Management and Clerical	..	...	...	...	54

895

Mr. P. M. Hansen was the first manager and later managing director of the Company. He was succeeded, in 1907, by Mr. J. J. Walklate, who was appointed general manager and held the position under the Company's control and afterwards under the Corporation's ownership until his death in 1922.

SICK AND ACCIDENT BENEFIT SOCIETY.

This Society, which has about 500 members, was established in 1904 to provide payment to members who are unable to follow their occupation through illness. The contribution is 6d per week for sick and funeral benefit ; 9d per week for medical and dispensary benefit ; and 1/6 per quarter for hospital benefit. The weekly alment to members is £1.

RECREATION CLUB.

This body was established to promote social intercourse among the tramways staff. The club's activities include the holding of water excursions and evening socials ; the promotion of football, cricket, and shooting, in which connection a miniature rifle range has been fitted up. The club has also a library. The membership is about 480, and the weekly contribution is 3d.

ACCIDENT FUND.

The third party and employers' liability settlements for the year amounted to £1,745 4s 2d, which was

charged against the £3,000—allocated for the purpose from the 1920 accounts. With the £3,000 allocated from the 1921 accounts the fund is in credit £4,254 15s 10d as at the 31st March, 1921.

A statistical table, containing detailed information relative to the progress of the Tramways undertaking, will be found on the next page.

W. ST. J. CLARKE,
Acting General Manager.

AUCKLAND CITY TRAMWAYS.

TRAFFIC STATISTICS - PROGRESS STATEMENT.

Year ended.	31st Dec., 1903.	30th June, 1913.	30th June, 1918.	30th June, 1919.	(9 months) 31st March, 1920.	31st March, 1921.	31st Mar., 1922.
Route miles open ...	17.2	25.42	27.13	27.13	27.13	27.51	27.51
Single line ...	5.4	4.64	4.36	4.36	4.36	3.37	3.37
Double line ...	11.8	20.78	22.77	22.77	22.77	24.14	24.14
No. of cars ...	43	156	156	156	156	151	157
Miles run ...	3,270,529	3,412,053	3,335,354	3,335,354	2,701,954	3,790,146	4,232,897
Passengers carried...	13,535,611	10,331,316	44,823,967	43,785,594	36,952,956	45,820,939	48,099,331
Traffic Receipts ...	£81,773	£257,592	£294,564	£292,503	£251,461	£414,251	£504,011
Sundry Receipts ...	£1,157	£4,122	£6,870	£8,221	£3,152	£4,985	£5,441
Total Receipts ...	£82,930	£261,714	£301,434	£300,724	£254,613	£419,186	£509,452
Recpts. per passenger	1.42d	1.53d	1.58d	1.60d	1.63d	2.19d	2.51d
Exp. per passenger	.83d	.93d	1.04d	1.19d	1.09d	1.54d	1.92d
Passengers per mile	12.33	13.13	13.13	13.13	13.67	12.09	11.36
Staff ...	748	663	733	808	895		

NOTE.—CARS.—The reduction in the number is accounted for by the permanent coupling of small cars in pairs and counting coupled cars as units.

ELECTORAL DEPARTMENT.

ELECTORS' ROLL.

The Electors' Roll is compiled biennially prior to the election of the Mayor and Councillors.

The franchise embraces not only "Ratepayers," but also "Freeholders" and "Residentials."

The qualifications are as follows:—

RATEPAYER — Is a person whose name appears in the "Occupiers" column of the Valuation Roll. (The meaning of the word "Occupier" in this case is, either the owner of the property or the lessee, irrespective of who actually pays the rates.)

FREEHOLDER—Is a person who signs a claim of enrolment, declaring that he, or she, is the actual registered beneficial owner of a freehold estate in land of the capital value of not less than £25.

This qualification is used when the owner of land has leased his or her property to some other person, and is not primarily responsible for the rates.

RESIDENTIAL— Is a person who either actually resides within the city, or who, not being a resident, pays a rent within the city.

The latter qualification permits the enrolment of persons who rent offices, etc., in the city, but who reside outside the city limits.

Each individual seeking the franchise must be 21 years of age, and must be a British subject by birth or by naturalisation.

In the case of husband and wife, any qualification possessed by one of them is deemed to be possessed by each.

No person enrolled has more than one vote, and no person enrolled as a "Residential" is permitted to vote on any proposal relating to loans or rates.

Persons enrolled as "Residentials" who fail to vote at General Elections are omitted when the next Roll is compiled, notwithstanding the fact that persons may have voted at a subsequent by-election. In cases of this sort it is necessary for new enrolment claims to be made.

ELECTIONS.

The municipal elections embrace not only the election of the Mayor and 21 Councillors, but also the election of members for the Auckland Harbour Board and Auckland Hospital Board.

The last election was held on April 27th, 1921, and out of 31,641 names on the Electors' Roll, 20,420 persons voted, or 64%. This is a record vote for the City of Auckland.

The mayoralty was uncontested, but for the election of City Councillors and members of the Auckland Harbour Board and Auckland Hospital Board, the following are the figures:—

	Votes recorded.
50 Candidates nominated for 21 seats on	
Council 	277,141
6 Candidates nominated for 3 seats on	
Harbour Board 	42,939
13 Candidates nominated for 5 seats on	
Hospital Board 	73,291
<hr/>	
A total of 	393,371 votes

To issue the ballot papers and count this large number of votes, 32 booths were engaged, and the following officers employed:—114 deputy returning officers, 114 poll clerks, and 27 assistant enumerators (after 7 p.m.).

The hours for polling were from 9 a.m. until 7 p.m. It was 4 o'clock the following morning before the results could be handed to the press for publication.

At the official count, which took three days to complete, there were 56 clerks engaged.

Other issues determined by the votes of the people are:—

1. The statutory half-holiday, which is decided by the voters entitled to vote at the municipal elections

2. The system of rating (capital value, unimproved value, or annual value) determined by vote of ratepayers only.

A new body, the Auckland Electric Power Board, came into being subsequent to the passing of the Auckland Electric Power Board Act, 1921. The electoral district embraces the City of Auckland, the boroughs of Onehunga, Otahuhu, Mount Albert, Mount Eden and Newmarket; the road districts of One Tree Hill and Mount Roskill; the town districts of Ellerslie, Papakura, Papatoetoe and Manurewa; and the County of Manukau.

The first election of members of the Board took place on February 28th, 1922. There were 21 candidates for 12 seats. The franchise permitted only ratepayers to vote; the term ratepayer, in this case, meaning the names of persons appearing in the "Occupiers" column of the Valuation Roll. The number of electors entitled to vote at this election was about 27,800, the City proportion of same being 13,168, or 47%.

P. F. NOTLEY,
Returning Officer.

VALUER'S DEPARTMENT.

VALUATION OF PROPERTY FOR RATING PURPOSES.

The Valuation Department provides the figures upon which the major portion of the revenue of the local body is obtained. It is a matter that very few take an interest in until *after* the *Rate Demand* has been sent out by the Rate Collector, when, of course, it is too late for redress should there be any just grievance.

An attempt has been made to extract the main features of the Rating Act, as pertaining to the valuations for the City of Auckland, with the following results:—

The local authority of any district (other than a district wherein the system of rating on the unimproved value is in force) may at any time, by resolution, determine whether the system of rating on the annual value or the capital value shall in future be in force in the district, and any such resolution may, after three years, be rescinded and a new resolution passed.

Where the system of rating on the capital value or on the unimproved value is in force, the valuation used is that supplied by the Valuer-General under the Valuation of Land Act, prepared by valuers employed as permanent Government officers. The valuation rolls

are revised from time to time as required, but there is no fixed period between one revision and another.

Where the system of rating on the annual value is in force the local authority appoints and pays its own valuer, and the valuation may be made annually or triennially.

The *annual value* is deemed to be the letting-value less 20 per cent. in case of houses, buildings, and other perishable property, and less 10 per cent. in cases of land: but in no case less than 5 per cent. of the value of the fee-simple. The *capital value* is deemed to be the selling value of the land, including improvements, at the time of valuation. The *unimproved value* is deemed to be the selling value of the land at the time of valuation, excluding the value of any existing improvements.

The system of rating adopted for the City of Auckland is that of annual value. The following examples illustrate the *modus operandi*:—

A dwelling let at £1 per week (worth

£700), equals	...	...	...	£52 per annum
Less 20%	...	...	...	10

The annual value is £42

but if a dwelling is worth £900 and lets only at £1 per week, then the value would be £45. (5% of the £900.)

All properties are dealt with as being freehold.

In the case of vacant land, the freehold value is arrived at, and 5% of that is the annual value, so that idle land does not escape local rates.

AUCKLAND MUNICIPAL HANDBOOK.

In certain cases where during the rating period a building has been untenanted for six months, the owner may, on application, obtain a refund of half rates.

The valuation list for the City of Auckland is compiled by the City Valuer, and deposited with the Town Clerk on January 15th each year. It is then advertised as open for inspection until February 15th, and objections to any matter contained therein may be lodged during that period.

After the objections are lodged, an Assessment Court is held, and is presided over by the District Magistrate, who becomes the Judge of the Assessment Court. On the day of the sitting of the Court, which is fixed by the judge, the objections are heard and dealt with. The valuation list is signed by the judge, and it then becomes the Valuation Roll. After this, the total ratable value is submitted to the Mayor and Council, and a rate in the £, which will bring the necessary revenue for the City's expenditure, is duly struck.

The total number of assessments on the 1922-23 valuation list, which was submitted by the Valuer on January 15th, 1922, consisted of 21,179.

The total ratable value for the City of

Auckland, submitted on January 15th,

1922, was	£1,596,324
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Less reductions made by the Assessment

Court	1,798
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Net total ratable value	£1,594,526
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AUCKLAND MUNICIPAL HANDBOOK.

As an indication of the real estate market during the last twelve months (November 1st, 1920, until October 31st, 1921) no less than 2,927 letters were received from solicitors and others notifying sales of properties.

Appended is a table showing, for the last decade, the increase in the valuations for the City of Auckland. A portion of the increase is accounted for by the merging of outside districts.

The ratable value per acre, in 1913, prior to the era of amalgamation, was, for the City of Auckland, £389. This has gradually been reduced by the amalgamation of various suburban districts, and at the present time the ratable value per acre is £154; but as building operations progress this will rise in proportion. At the present date, the ratable value of the City, omitting the amalgamated areas, is £553 per acre.

In 1913 the following comparison was made, viz:—

			Ratable value per acre.
The City of Auckland (1,878 acres)	...	£389	
Parnell Borough (470 acres)	...	£125	
Arch Hill District (125 acres)	...	£94	

Another interesting fact is that practically 16% of the ratable value pertains to Queen Street alone.

P. F. NOTLEY,

City Valuer.

Rating Year.	No. of Assessments.	Ratable Value submitted to Asmnt. Court.	Reduction made at Asmnt. Court.	Net total Ratable Value on which rates were levied.	Remarks.
1912/13	9,468	£ 681,986	£2,617, or ·38%	£679,369	The City of Auckland at this period included Ponsonby, Grafton, and Newton districts (1948 acres).
1913/14	9,648	£ 732,289	£1,670, or ·22%	£730,619 57,878 14,369 <hr/> Total £802,866	The City of Auckland was enlarged by the amalgamation of the Parnell Borough (470 acres), 15/2/1913, and Arch Hill District (152 acres), 1/4/1913.
1914/15	11,540	£864,820	£12,300, or 1·4%*	£852,620	*This large reduction was the result of an appeal by the Gas Company, Grey Lynn Borough (900 acres) amalgamated with the City, 1/7/14, conditionally on being rated on the unimproved values, as supplied by the Government Valuation Department (for 7 years).
1915/16	11,769	£893,346	£5,570, or 62%	£887,776 111,548 <hr/> Total £999,324	The City of Auckland was enlarged by the amalgamation of Remuera Road District (3,500 acres), 1/3/15.
				Exclusive of Grey Lynn area, but inclusive of Parnell and Arch Hill.	
				Remuera based on 5% of Govt. Captl. Valuation.	
				Exclusive of Grey Lynn.	

Rating Year.	No. of Assessments	Ratable Value submitted to Asmnt. Court.	Reduction made at Asmnt. Court.	Net total Ratable Value on which rates were levied.	Remarks.
1916/17	14,916	£896,881	£5,331, or .59%	<p>112,358 Remuera based on 5% of Govt. Captl. Valuation.</p> <p>£891,550</p> <p>19,440 Eden Terrace based on 6% of Govt. Captl. Valuation.</p> <p><u>Total £1,023,348</u> Exclusive of Grey Lynn.</p>	The City of Auckland was enlarged by the amalgamation of Eden Terrace District (98 acres), 1/10/15
1917/18	15,277	£1,066,552	£6,909, or .64%	<p>£1,059,719 Inclusive of Rem. and E. Ter. based on 5% Govt Captl. Valuation.</p> <p>58,393</p> <p><u>Total £1,118,112</u> Exclusive of Grey Lynn.</p>	The City of Auckland was enlarged by the amalgamation of Epsom Road District (1,139 acres), on 1/2/17.
1918/19	15,321	£1,072,613	£5,186, or .51%	<p>£1,067,127 Epsom based on 5% of Govt Captl. Valuation.</p> <p>58,571</p> <p><u>Total £1,125,698</u> Exclusive of Grey Lynn.</p>	

Rating Year.	No. of Assessments.	Ratable Value submitted to Asmnt. Court.	Reduction made at Asmnt. Court.	Net total Ratable Value on which rates were levied.	Remarks.
1919/20	15,569	£1,081,508	£2,485, or .22%	£1,079,023 58,276 Epsom based on 5% of Govt. Caplt. Valuation. Total £1,137,299 Ex cl usive of Grey Lynn.	
1920/21	16,779	£1,258,698	£6,130, or .40%	£1,252,568 Includes Epsom but not Grey Lynn	The City at this date included Parnell, Arch Hill, Remuera, Epsom, and Grey Lynn.
1921/22	19,719	£1,388,758 100,510	£4,449, or .31% £339, or .33%	£1,384,309 100,171 12,615 City, etc. Grey Lynn area 1st year on annual value, Point Chevalier, based on 5% of Govt. Capital Valuation. Total, £1,497,095	The City of Auckland was enlarged by the amalgamation of Point Chevalier Road District (1,220 acres) on 1/4 1921.
1922/23	21,179	£1,596,324	£4,798, or .3%	£1,591,526	Includes the whole area under the City Council's control.

TRAFFIC DEPARTMENT.

The Traffic Department has been established primarily for the due performance and efficient control of the duties entailed by the provisions contained in the City By-laws, "The Motor Regulation Act, 1908," "The Municipal Corporations Act, 1920," "The Dogs Registration Act, 1908," and "Light on Vehicles Act, 1915."

While the organisation of the Department dates from about 1894, its inception may be said to date from 1878. In this year it was controlled by the Sanitary Inspector, who embraced it as a part of his Department. In 1894, Council realised the necessity of creating a Traffic Department to deal with the control of traffic and the issuing of licenses. A Chief Inspector was appointed and a separate Department established. Since that time the importance of the Department has greatly increased, owing to the advent of motor transit, which is large for a city of the population and size of Auckland, and to the extension of the boundaries of the City.

The Department's ramifications include the general control of traffic, registration of motor vehicles, bicycles and dogs, and the issuing and control of the following licenses:—Taxi and omnibus, heavy traffic (motor and horse vehicles), horse carriages, drivers (motor and horse), conductors, street stalls, hawkers,

bootblacks, newsvendors, street musicians, porters, and the issuing of certificates of competency to drivers of private motor cars and cycles. The Department is also responsible for the control of theatres and places of amusement, and the impounding of stray cattle.

The system of registration of motor vehicles is by personal application and the issuing of numerals to be attached to the car for identification purposes. Every person driving a motor car must hold a certificate to prove that he is competent to drive and control a car. The minimum age is fixed at 17 years. The certificate is granted after the Traffic Inspector of the Council is satisfied as to competency.

Applicants for licenses, under all heads, obtain an application form from the Department, which, when details are filled in, is handed by applicant to the Police Department, which investigates and reports direct to Council, and in the event of the report proving satisfactory, Council forthwith authorises the Department to issue the license. Council exercises a close scrutiny of all licenses, and any delinquents are promptly dealt with.

Licensed motor car fares are arranged under two headings—(a) by distance, and (b) by time. Such is optional with the hirer:—

A.—By Distance.

	s.	d.
Minimum fare for 1 mile for 1 or 2 passengers ...	2	6
For every additional passenger beyond 2 ...	1	0

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For every additional mile or fraction thereof for	s. d.
1 to 4 passengers	1 3
For every additional passenger above 4, per mile	0 3
The charge by distance shall not include the return of the car to the stand.	

B.—By Time. s. d.

For up to 4 passengers at per hour, including return to stand	15 0
For each additional passenger, per hour	2 6
Detention for every 5 minutes or fraction thereof	0 6
From midnight to 6 o'clock a.m., a 50 per cent. increase on the foregoing amounts.	

The time of departure of omnibuses from their respective stands to places on their respective routes is regulated by time-tables approved and controlled by this Department. The scale of fares is 3d per mile or fraction thereof for each passenger.

Vehicles that ply for hire and are used for commercial purposes come under the category of "Heavy Traffic," for which an annual license is issued on application.

Motor and horse-drawn vans used commercially operate under the following schedule of rates:—

Fares by Distance. £ s. d.

For any quantity of goods or portable package not exceeding 5wt., the distance being a mile or under on the level—	
(a) By horse-drawn van	0 3 6
(b) By motor van	0 3 6

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For any quantity of goods exceeding 5 cwt. £ s. d.
 and not exceeding 1 ton, the distance
 being a mile or under on the level—

(a) By horse-drawn van 0 6 6

(b) By motor van 0 6 6

For any further or other distance than one
 mile on the level, the fare to be charged
 by time.

For 1 horse van, at per hour 0 5 6

„ 2 „ „ „ „ „ 0 8 0

„ 2 „ furniture van „ „ 0 9 0

„ each additional horse, at per hour 0 2 6

For motor vans, at per hour—

Up to half-ton carrying capacity 0 10 0

Over $\frac{1}{2}$ -ton, but not exceeding 1 ton 0 12 6

„ 1 „ „ „ „ 2 „ „ 0 15 0

„ 2 „ „ „ „ 3 „ „ 1 0 0

„ 3 „ „ „ „ „ „ 1 2 6

The employer shall have the option of hiring by time or distance, except for removal of furniture, which shall always be paid for by time, the carter being bound to use all reasonable expedition, and in all other cases the hiring to be by time, unless at the time of hiring the hirer exercises his option and hires by distance.

The rapid growth of motor transport in the City during recent years is shown by the fact that the registration numbers are now well on the 10,000 mark, and the Government has recently increased the numerals from 1 to 12,000. It is estimated that there are 6,000

motor vehicles of all classes on the City streets daily. In order to meet the requirements and convenience of owners of private motor cars, the City Council has set aside a number of streets in which private cars may be "parked." These cars are permitted to stand unattended in these "parking" areas day or night, but no responsibility is accepted by the Corporation in case of damage.

The City Council has established a system of "safety zones" for tram passengers, which has proved of public benefit. By-laws protecting these zones from the encroachment of horse, vehicular and motor traffic have been passed.

GEO. R. HOGAN,

Chief Traffic Inspector.

STORES PURCHASING DEPARTMENT.

This Department came into operation on July 1st, 1921, and was established for the purpose of securing economy in purchasing Corporation supplies. Prior to this each department had been responsible for the purchasing of its own supplies.

For the purpose of ascertaining the requirements of each department the Officer in Charge of the Stores Department submits schedules of the goods purchased and used, over a given period, to the heads of departments, who in return are required to fill in the estimated requirements for a year ahead. These schedules are collated by the Stores Officer, who is then in a position to obtain prices for the total amounts of any particular item required by the whole of the Corporation Departments.

The prices so obtained are, after consultation between the Stores Officer and the heads of departments, recommended to the Stores Committee for acceptance or otherwise.

TENDERS AND QUOTATIONS.

For the supply of goods of an expensive character, specifications are prepared and tenders invited by advertisement. For smaller lines prices are obtained on special quotation sheets, which are posted to the firms on the list for the particular class of supplies required.

ORDERS.

When the lowest satisfactory tenders are ascertained, orders on the triplicate official order form are placed for items selected from each tender. The original copy is sent to the supplier, the duplicate copy is retained in the Purchasing Department, and the triplicate copy forwarded to the department for which the goods are ordered.

DELIVERIES.

The supplies are delivered to the department ordering them, and their receipt vouched for in the space provided on the back of the pink copy of the order form, which is returned to the Purchasing Department.

INVOICES.

All invoices for goods supplied are first delivered to the Purchasing Department, where they are checked with the deliveries and prices on the (pink) copy of the order returned from the department, after which they are forwarded to the department concerned for the purpose of accounting.

STORING OF MATERIALS.

The bulk of the material used by the Corporation is stored at Mount Roskill Tramway Depot, and from there the various departments are supplied weekly.

S. M. FARRELLY,
Officer in Charge.

SANITATION AND PUBLIC HEALTH.

HISTORICAL.

The formation of the Sanitary Department practically dates from 1902, when the Council decided to separate the duties of Inspector of Nuisances from the Traffic Inspector's Office, and to establish a department responsible only for the health and sanitation of the City. This step was the outcome of the new health legislation, which brought matters affecting the health and welfare of the community into prominence, and necessitated increased activity on the part of local bodies.

Previous to this, the statutory duties of preventing and suppressing nuisances, and protecting the people against any outbreak of infectious diseases, had been carried out in a manner conformable with the opinions then prevalent respecting such matters. The Inspector's powers were extremely limited. He reported to the Council upon the cleanliness of all streets, public places, and drains, and as to any nuisances; visited and inspected back yards and premises, rubbish receptacles, and "all buildings in which any manufactory, trade, or business is carried on which, from its nature, may become offensive to the inhabitants of the borough or injurious to health," but, for some reason difficult to comprehend, "the decision of the Council as to what building" should be inspected hereunder was "final."

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Commencing with a staff of two, the Department's career has been one of continuous, if somewhat irregular, development, the officers to-day numbering nineteen. This expansion is not alone due to the fact that the population has considerably more than doubled, or that the area of the City, by the inclusion of suburban districts, has increased over five-fold, but to the greater vigilance and efficiency that is now needed to meet the demands of a continuously rising standard of civic hygiene, and in particular to the necessity of having a sufficient and well-equipped staff to provide against the introduction of epidemic disease, to which Auckland, as an important shipping centre, is normally exposed.

During the time the Sanitary Department has been in existence, conceptions of health, public and private, have undergone the most radical changes. Sanitation, with its many and complex problems, has now become one of the foremost of municipal undertakings. Health is conceived as something more than the mere absence of disease, and to a great extent as being purchasable. The keynote of modern health principles and practice is prevention.

For several years supervision was exercised over the sanitary and refuse removal services, then carried out by contract. This system was, needless to say, an almost constant source of dissatisfaction to the public and an anxiety to the Council. Ultimately, the contracts had to be terminated and the work undertaken

by the City Engineer. Until a year ago all plumbing and drainage was done under the Department's direction: its inception necessitating the preparation of by-laws, the teaching, examining, and licensing of plumbers and drainers. Practically all premises in the City were re-drained in accordance with the requirements of the by-laws, and the owners of some 8,000 places dependent on the conservancy system were compelled to connect with the sewers.

LEGISLATION.

The work of the Sanitary Department is largely based upon and governed by the following Acts of Parliament, namely, the "Municipal Corporations Act," the "Public Health Act, 1900," and "Health Act, 1920." An epitome of these follows:—

"MUNICIPAL CORPORATIONS ACT."

This Act requires first consideration, not only as the foundation of municipal administration, but as the main support of the activities of the Sanitary Department since its inauguration. In its present form, as consolidated in 1920, it is the principal source of authority for by-laws relating to sanitation in its widest meaning.

Under this Act, "the Council may do all things necessary from time to time for the preservation of the public health and convenience, and for carrying into effect the provisions of the 'Health Act, 1920,' so far as they apply to boroughs."

Although the adoption of these powers was optional until recently, the Council had availed itself of them to the fullest extent, and the sanitary by-laws made thereunder leave little to be desired, even with the amplified meanings given to nuisances, and the additional means provided in the Health Act for dealing with unhealthy and other conditions.

“THE PUBLIC HEALTH ACT, 1900.”

In many respects this Act was of striking importance. It eliminated the Central Board of Health, took away the powers vested in local authorities as Local Boards of Health, and substituted a Ministry of Health, the safeguarding of the health of the people becoming a matter for the State. The country was divided into a number of health districts, with district health officers in the principal cities, thus rendering the local Medical Officers of Health unnecessary.

The transference of other health powers hitherto of local control followed, for in 1907, by the “Sale of Food and Drugs Act,” the supervision of foodstuffs and the taking of samples by the Council’s officers for analysis under the “Adulteration Prevention Act, 1880,” became the duty of the Department of Health. In 1910, by an Amendment of the definition of “Local Authority” in the “Public Health Act,” Hospital and Charitable Aid Boards became responsible for everything relating to infectious diseases, including the inspection and disinfection of premises.

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By an arrangement with the Health Department and the Hospital and Charitable Aid Board, Auckland retained control over infectious diseases, and although it was the only city to do so, its action was fully justified, when the Health Authorities ten years later, as a result of their experience here and elsewhere, restored the responsibility to the municipal authorities.

“The Public Health Act, 1900,” as amended from time to time, was consolidated in 1908, and with further occasional amendments up to 1919, it became gradually more complicated, uncertain in meaning, and unnecessarily costly in administration. The powers given to local authorities were numerous and varied, but most, if not all of them, as well as the funds and machinery of the local authorities to a considerable extent, were at the disposal of the Chief or District Health Officer or the Minister, and could be controlled by the Health Department “both legally and practically to an almost unlimited extent.”

“THE HEALTH ACT, 1920.”

Included in the many improvements this Act possesses over its predecessor, the following are worthy of mention:—It defines the relative responsibilities of the State and local authorities for safeguarding the health of the people, eliminates some overlapping of sanitary control that previously existed, gives extended powers for dealing with unhealthy conditions, sets a much higher standard of sanitation, and delegates to

local authorities certain powers for the promotion and conservation of health in their districts.

BY-LAWS RELATING TO SANITATION.

To keep abreast of the requirements of the City and to maintain an efficient sanitary administration, the Council has exercised its powers to the utmost in the making of by-laws.

In addition to the adoption of Section 26 of "The Health Act" defining nuisances, which in itself almost constitutes a sanitary code, by-laws are provided fully covering public health and sanitary interests.

DEPARTMENTAL ACTIVITIES.

As practically everything required for dealing with matters affecting the health of the public and the sanitation of the City is provided in the By-laws and Regulations under the Health Act, their application in detail comprises the duties of the Department.

The relative importance attached to the different branches of the work varies from time to time, but the vulnerability of the waterfront district, and the possibility of the introduction of disease from overseas are always kept in view, and the work in many respects organised to meet such a contingency.

The City is inspected systematically, house to house, averaging under normal conditions from two to three inspections per year, but certain localities and

premises receive more frequent visits, while others in suburban districts require less frequent attention. Special inspections are made of places where food is stored or handled, stables, and premises occupied by Asiatics and others.

Special inspectors undertake the inspection and licensing of places used in connection with the preparation, storage, or sale of food, the investigation of cases of infectious disease and the disinfection of premises, also the supervision of stores and depots where dangerous goods are kept. A woman sanitary inspector is employed visiting the homes of people requiring her advice and attention. Her work is really an extension and rounding-off of sanitary inspectors' work, more reliance being placed on persuasion to secure the improvements sought. She also serves as a connecting link between the various social workers and the Department, bringing together the supply and demand of social service.

The figures given in the following summary of work will indicate to some extent the efforts made during the past year to keep the City clean and healthy:—

SUMMARY OF WORK

For the Year Ending 31st March, 1922.

Number of inspections made	41,787
Number of complaints received and investigated	982
Notifiable infectious diseases dealt with ...	571
Number of rats caught	8,296
Letters, etc., received and despatched	4,025

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Departmental reports and reports to Medical

Officer of Health	1,016
Licenses issued	1,283
Notices issued under Health Act and By-laws ...	3,555
Premises disinfected	397
Buildings recommended for demolition	5
Prosecutions for non-compliance with By-laws ...	138

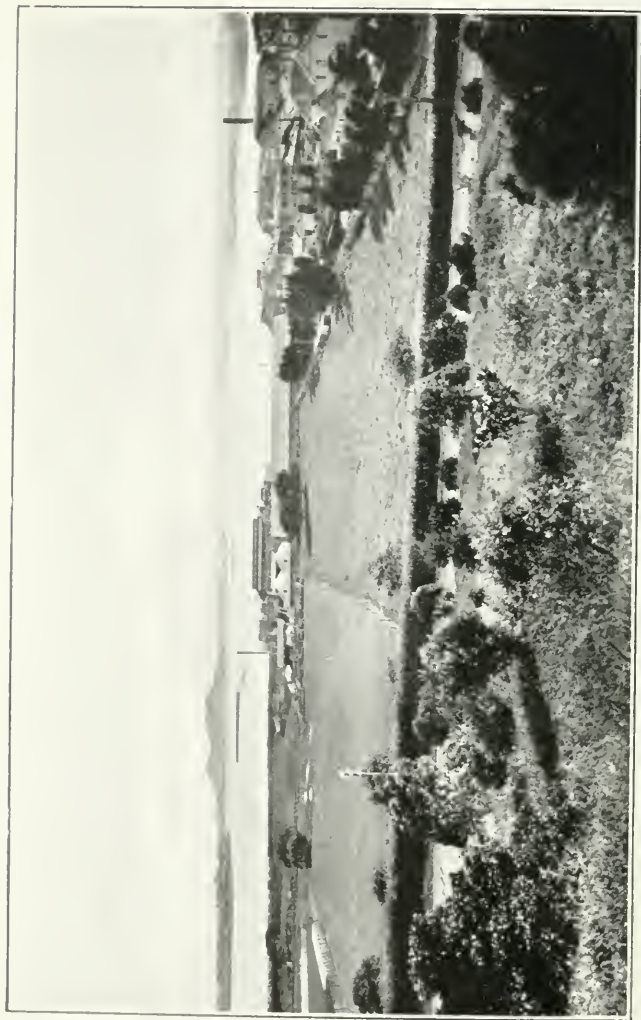
Vital statistics covering the last twenty years are given in tabular form on the following page.

C. T. HAYNES, M.R. SAN. I.,
Chief Sanitary Inspector.

VITAL STATISTICS for the Period 1901-1921.

As shown by the Official Census Returns.

YEAR	POPULATION AT CENSUS YEARS.	BIRTH RATE PER 1000 OF POPULATION.	DEATH RATE PER 1000 OF POPULATION.	INFANT MORTALITY— i.e., deaths of children under one year of age per 1000 births.
1901	34,213	—	13.10	115.7
1903	37,736	—	12.51	99.2
1911	40,536	—	13.68	68.6
1916	64,951	23.26	11.10	74.1
1921	81,712	19.41	10.50	64.3



GENERAL VIEW OF THE ABATTOIR, OTAHUHU.

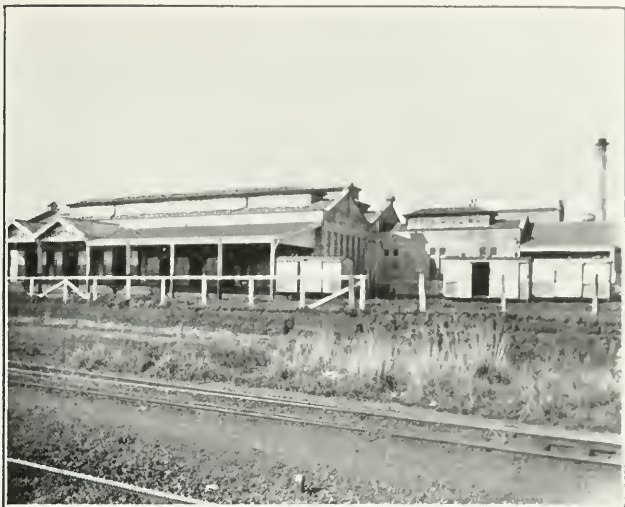
ABATTOIR.

Prior to the passing of "The Slaughtering and Inspection Act, 1908," it was customary for the butchers to do their own slaughtering, the slaughter-house, Richmond, being largely used for this purpose, although some did their work under most insanitary conditions, in backyards, stables, etc. In 1907 the City Council decided that the premises at Richmond were totally unsuitable and inadequate, and that a new and up-to-date abattoir was essential.

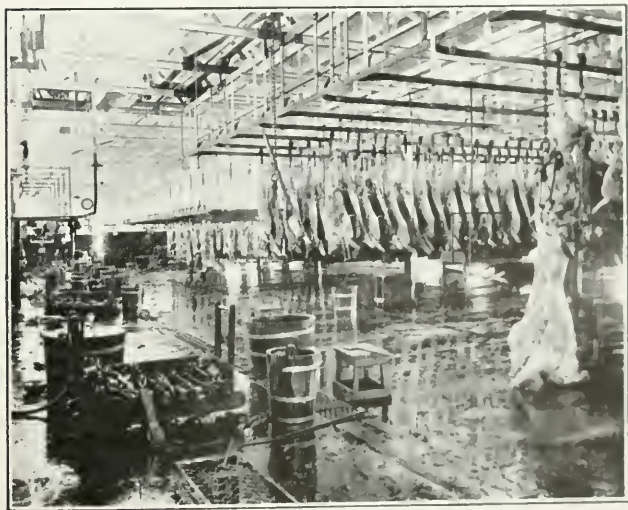
A new site, of about 27 acres, was acquired at Westfield, near Otahuhu, on the Main Trunk Railway, about 8 miles from the centre of the city. This property is favourably situated for an abattoir, being a very narrow strip of land lying between the Waitemata and Manukau Harbours. The situation, exposed as it is to the prevailing westerly wind, ensures a cool breeze on the warmest day in summer, which is very beneficial to the meat; fresh, cool air being a well known preservative.

A loan of £26,000 was raised for the purchase of the land and the erection of the necessary buildings. Building operations were commenced in 1907, and in 1908, the loan proving insufficient, a further £9,000 was obtained. The building was completed and opened to the master butchers for killing in the early part of 1909.

The buildings erected at that time consisted of the main slaughter hall and hanging room. Substantially built of brick, 2 feet thick, and concrete covered, this hall has sufficient space for 20 slaughtermen to work, and the following stock can be conveniently hung after slaughter, pending removal to town—viz., 120 beef, 100 veal, 100 pork, 800 mutton and lamb. At both ends of this hall are large rooms used for the handling of by-products. The office block, almost as substantially built as the slaughter hall, is conveniently situated to the north-west of the main building, and consists of the manager's office, the general office, and a small laboratory, wherein first aid can be rendered to the injured. At the southern end, across the road that encircles the abattoir, is situated the wooden block, where the Government meat inspectors and contract slaughtermen have their offices, and the workmen their luncheon room. Change and bath rooms, clothes drying room, and the usual offices are under the same roof as the slaughter hall. Immediately behind the main building are the sheep and cattle drafting yards and shelter sheds. Fat stock sales are held on Wednesday of each week at the saleyards, which practically adjoin the abattoir grounds, and stock bought by the butchers are held and fed by the Council, pending slaughter. Cottages for the stockman, foreman contractor, and a two storeyed house for the Manager of the Abattoir comprise the remaining buildings on the abattoir ground. The remainder of the land is in natural grass



ABATTOIR: EXTERIOR.



ABATTOIR: INTERIOR.

and plantation, and is used exclusively for grazing stock.

Stock killed at the Auckland Municipal Abattoir for the year ending 31st March, 1921, comprised 20,650 cattle, 8,290 calves, 11,516 pigs, 98,498 sheep, and 16,528 lambs. The revenue derived from the slaughter of this stock was £15,949 4s 9d, which does not include fees paid by firms killing for local consumption at their own slaughterhouse, or for meat supplied locally by either of the freezing works. Charges for killing, etc., are regulated by by-laws.

Up to September, 1921, the Council employed its own slaughtermen, etc., but since that date the slaughtering has been done by contractors, who are also responsible to the Council for the delivery of the meat killed to the correct owners. The present general system is to load meat killed on a certain day in the early hours of the following morning. The Railway Department supplies a sufficient number of ventilated meat wagons for this purpose, but many of the butchers prefer to have their meat carried into town by motor wagon. With the advent of better roads, it is anticipated that the latter method will become general, ensuring, as it does, more speedy delivery to the shops and avoiding the repeated handling which carriage by rail necessitates.

The by-products are sold by the Council on behalf of the butchers, and are disposed of by contract, the contractors paying the Council, and the Council crediting the butchers monthly.

The Abattoir is subject to inspection by the Department of Agriculture, which supplies qualified inspectors to examine all stock killed. Stock inspectors also make a regular ante-mortem inspection of stock offered at the fat stock sales, and condemn all stock, before slaughter, whose condition warrants it. Stock condemned at the Abattoir does not become a total loss to the owner, a small amount, in most cases, being paid as compensation by the Government, the balance, over and above the small sum obtained from the sale of the diseased meat, being met by the Condemned Stock Insurance Fund, to which the majority of the butchers contribute.

The drainage of the Abattoir is easily dealt with, on account of its position on the foreshore of the Manukau Harbour. Having nothing more offensive to deal with than the effluent from the septic tanks and the water from washing down the Abattoir, a holding tank which debouches its contents daily on the ebb tide is the extremely simple and effective method of dealing with this most important matter.

The chief factor in the cleanliness of an Abattoir and the health of stock is water. When the Abattoir was first started, a supply of water was obtained from a well in close proximity, but this supply was found to be most unsatisfactory, being strongly impregnated with oxide, which left a red deposit wherever used, and was full of vegetable poison, which soon caused heavy mortality amongst the stock.

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Arrangements were quickly made to bring a supply of pure water from Onehunga, a distance of nearly 4 miles.

At the present time, plans are being prepared by the City Engineer for the remodelling of the Abattoir, which will convert it into the largest and most up-to-date slaughter house in the Dominion. Provision is being made for twice as much hanging space as now exists, additional killing space, and a chilling room. The lack of a chiller has long been a stumbling block to the more rapid expansion of this branch of municipal enterprise.

R. W. RUGG,
Works Manager.

MUNICIPAL FISH MARKET.

The Market is under the control of a Markets Committee, and is supervised by a manager. The premises, consisting of offices, smoke houses, chilling plant, storage trenches, net shed, carpenter's shop, cleaning shed, and general equipment, are situated off Customs Street West, attached to which is a wharf for trawlers and fishing boats to discharge their catches.

The Council has two steam trawlers, the *Simplon* and the *Cowan*. The *Simplon*, which was formerly a North Sea trawler, is a steel vessel of 184 gross tonnage. She is 109 feet long, and carries a crew of eleven hands. During the war period she did useful work mine-sweeping on the New Zealand coast, and has proved to be the right size for trawling in these waters, going as far afield as the North Cape and the west coast. The *Cowan* is built of ironbark, and has been converted into a trawler, her gross tonnage being 67 tons; length 83 feet. She carries a crew of 7 hands, and although of much smaller dimensions than the *Simplon*, her fishing reports compare more than favourably with any trawler in New Zealand.

In addition to the two trawlers, the Department buys from line and net men, and during last winter employed between 30 and 40 small boats to augment the supply of the trawlers. The demand for fish is steadily growing, but the operations of the City Council



FISH-CURING.



A CATCH ON A TRAWLER.

in its Fish Market Department have had the effect of keeping it at a reasonable price. In spite of the high cost of working material, etc., caused by the war, fish is cheaper in Auckland than in any other part of Australia or New Zealand.

The Market is open from 6 a.m. on Monday to 12 noon on Saturday, and is worked by a day shift and a night shift. Business is transacted in the office between the hours of 5.30 a.m. and 5.30 p.m. Hawkers, hotels, restaurants, hospitals, dealers, and the trade in general are supplied between these hours. Fish is received for cleaning and smoking at any hour of the day or night, and an average of 45 hands is employed. Two motor vehicles deliver to city and suburbs. The Department also sells fish direct to the public through its own shop, situated in Queen Street. So far the Council's operations have been chiefly of an experimental nature, and given proper facilities, there is no reason why the venture should not prove a success, as the experience gained has been invaluable.

During the year ending March 31st, 1921, the total weight of fish received from all sources was 1,040 tons, and returns from sales amounted to the sum of £49,758

J. H. DEIGHTON,
Manager.

FINANCE.

As the truest indication of the progress or otherwise of any institution or corporate body is recorded by its financial operations, it is of interest therefore to note that the first available balance sheet of the City of Auckland, namely, the area bounded by Stanley Street, Symonds Street, Karangahape Road and Franklin Road, was presented, under the "City Board Act, 1863," by the City Board of Commissioners for the period 1st June, 1863, to 30th June, 1864, and is given below in detail:—

RECEIPTS.

June 30, 1864—	£	s.	d.	£	s.	d.
From Provincial Government, on account of votes for City main sewer	3,049	3	5			
From ditto, on account of votes for City purposes	1,607	8	3			
Ditto, on account of vote loan of £20,000	5,000	0	0			
Ditto, on account of votes for water supply	700	0	0			
Ditto, contribution towards expense of cutting and forming Albert Street	500	0	0			
Ditto, one-half of expense of erecting wharf, etc., at wharf	13	14	6			
Ditto, expense of lighting wharf lamps	30	1	7			
				10,900	7	9
From rents of ground in Customs House Street	176	10	0			
From City rates	4,893	14	10			
From carters' licenses	182	10	0			
From lodging house licenses	21	0	0			
From insurance companies, proportion of expense of forming water tanks to fire engines	204	0	0			
From miscellaneous income	50	8	6			
				5,441	3	4
				£16,341	11	1

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PAYMENTS.

	£	s.	d.	£	s.	d.
For constructing City main sewer ...	2,773	13	11			
.. Repairing and cleansing streets ...	6,904	11	6			
.. Lighting streets, repairing lamps, etc.	185	8	8			
.. Repairing and working fire engines, forming water tanks, etc. ...	412	6	4			
.. Salaries of officers and servants of the Board	859	0	6			
.. Office furniture, printing, stationery, advertising, etc.	373	0	11			
.. Water supply, forming wells, erecting pumps, etc.	718	15	9			
.. Services of assistants to Engineer at City levels	54	17	10			
.. Price of stone breaking machine. Expenses towards erecting and working same	885	5	6			
.. Valuation of City property—sum paid to Messrs. Aitken & Reid ...	250	0	0			
.. Subscription to repair of Mount Eden Road	30	0	0			
.. Erecting urinal and water closet on the wharf	27	9	0			
.. Law expenses	73	4	0			
.. Miscellaneous expenditure	84	11	4			
				13,632	5	3
Balance in hand—main sewer	301	9	6			
Balance in hand—general purposes ...	2,107	16	4			
				2,709	5	10
				£16,341	11	1

(Sgd.) D. GRAHAM,

Auckland, 12th July, 1864.

Chairman.

The Assets and Liabilities for the period were as follows:—

ASSETS.

LIABILITIES.

	£	s.	d.		£	s.	d.
Money due to Board	6,517	4	10	Amount borrowed from Provincial Government ...	5,000	0	0
				Sundry creditors ...	1,237	5	8
					£6,237	5	8
				Contingent liabilities under existing con- tracts	1,620	19	7
					£10,857	5	3
	£6,517	4	10				

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It will be noticed that in the Receipts there are a number of items such as loan receipts, contributions and reimbursements of expenditures, which, if excluded, reduce the amount of actual revenue receipts to £5,237 3s 4d, mainly accounted for by City rates, £4,803 14s 10d.

Similarly on the Payments side most of the items are for new works, which, in later years, would be shewn in separate accounts under Loan headings.

The next available statement of Accounts is that of the City Council from 21st November, 1871, to 15th November, 1872, in which the distinction before referred to is made.

REVENUE RECEIPTS.			PAYMENTS FROM REVENUE		
	£	s. d.		£	s. d.
Ordinary revenue	5,132	7 1	New work	758	16 10
Special rate	1,208	2 3	Repairs and main-		
Endowment rents	1,378	5 0	tenance of streets		
			and sewers	6,215	6 7
			Salaries, office ex-		
			penses and sun-		
			dries	2,429	5 4
			Interest on debentures	1,805	14 10
	£7,718	14 4		£11,209	3 7
ASSETS.			LIABILITIES.		
	£	s. d.		£	s. d.
Machinery plant and			Loan debt	35,000	0 0
debtors	23,934	9 11	Mortgage	1,400	0 0
Accrued Sinking			Creditors	3,445	6 9
Fund	8,865	0 0			
	£32,799	9 11		£39,845	6 9

AUCKLAND MUNICIPAL HANDBOOK.

Comparative figures are given, in decennial periods, from that date:

Year.	Revenue Receipts.			Payments from Revenue.		
	£	s.	d.	£	s.	d.
31st March, 1882	23,864	1	7	28,586	17	9
.. .. 1892	65,315	8	2	57,008	17	1
.. .. 1902	81,649	9	0	91,009	0	8
.. .. 1912	214,962	11	7	226,991	13	3
.. .. 1921	1,075,840	18	11	1,161,417	14	9

Year.	Assets, including Sinking Fund Accrued.			Liabilities, including Loan Debts.		
	£	s.	d.	£	s.	d.
31st March, 1882	275,946	7	9	252,859	0	0
.. .. 1892	573,290	11	0	465,294	16	3
.. .. 1902	787,860	0	4	560,756	3	0
.. .. 1912	1,895,023	17	10	1,284,667	6	5
.. .. 1921	5,230,827	8	2	4,113,092	14	7

		Loan Debt.	Accrued Sinking Fund.	Nett
		£	£	£
1864	..	5,000	—	—
1872	...	35,000	8,865	26,135
1882	... ..	250,000	5,358	244,642
1892	... ..	419,900	26,867	423,033
1902	... ..	554,900	72,117	482,783
1912	... ..	1,178,200	168,299	1,009,901
1921	... ..	3,918,924	199,827	3,419,097

MUNICIPAL TRADING.

The following is the position of the Trading Accounts of the City for the year ended 31st March, 1921 :—

	Revenue.			Expenditure, including Interest, Depreciation, etc.			Surplus			Deficiency.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Waterworks	73,534	1	3	53,237	7	7	20,296	13	8			
Electricity	111,677	11	8	94,597	8	10	17,080	5	10			
*Tramways	419,185	18	5	333,524	9	11	25,661	8	6			
Fish Market	42,970	2	5	42,955	5	6	14	16	11			
Produce Markets	4,463	16	7	6,101	12	1				1,637	15	6
Abattoir	23,538	15	5	19,358	12	0	4,180	3	5			
Quarry, stone, etc	8,410	2	10	7,892	12	11	527	9	11			
	683,780	11	7	617,657	8	10	£67,760	18	3	£1,637	15	6

*The Revenue of the Tramways for the year ending 31st March, 1922, was £503,452.

ANDREW MESSER,
City Treasurer.

AUCKLAND HARBOUR BOARD.

The Port of Auckland is situated in the lower reaches of the Waitemata Estuary, at the head of the Hauraki Gulf. The estuary has a total area of 73 square miles and a water frontage of 194 miles. It is completely sheltered by an outlying chain of islands and by the peninsula at the northern entrance. Its geographical position (observation spot) is latitude 36deg. 49mins. 56secs. S. and longitude 174deg. 47mins. 57secs. E. In the inner harbour the anchorage is of the very best description, with water from 5 to 12 fathoms, and good holding ground. The tide rises and falls from 5ft. 6in. to 12ft. The whole of the harbour and approaches are well lighted, and the channels, shoals, etc., are clearly marked by buoys and beacons, so that at any hour the port may be entered with perfect safety.

The Auckland Harbour Board was constituted under "The Harbour Boards Act, 1870," and held its first meeting on June 1st, 1871, the Mayor of Auckland (Mr. P. A. Philips) presiding. At a subsequent meeting Captain W. C. Daldy was elected chairman, a position he occupied for six years, and Mr. John Ogilvie was appointed to the office of secretary and treasurer.

Prior to the constitution of the Harbour Board, the Port was under the control of the Provincial Council. Some reclamation had been carried out by that body.



PLAN OF AUCKLAND WATERFRONT TO-DAY.

The heavy black line represents the waterfront in 1841.

for at the time of the transference of the control from the Provincial Council to the Board considerable alteration had taken place on the foreshores. In the 'forties, Commercial Bay swept round from Britomart Point, along a beach, which subsequently became Fort Street, to a headland known successively as Stanley Point and Smales Point. This promontory stood in the vicinity of Albert Street and Customs Street West. By 1870 the foreshore had been reclaimed, and Customs Street East added to the City's highways. At that date Customs Street ended at the foot of a cliff, and a long flight of steps, known as "Jacob's Ladder," led up to Emily Place. On the western side of Queen Street, Customs Street ended at the waterfront opposite Albert Street.

The wharf accommodation in 1870 was very small indeed. The first Auckland wharf was the Wynyard Pier, which was built in the 'forties, and was situated in Official Bay, in a direct line from Short Street. Commercial Bay had from the first been selected as the shipping centre of Auckland, and by 1852 considerable work had been expended upon the improvement of the facilities for loading and unloading vessels. The Queen Street Wharf has always been the principal wharf, but in 1852 there was a small pier leading from the lane which ran from the Victoria Hotel to Shortland Street, and east of Graham's Bond (a stone building which still stands in Fort Street, but at that time was right on the waterfront) there was a landing stage. Between 1852 and 1870 a new wooden wharf replaced

the Queen Street one; another was erected opposite Gore Street, and a breakwater had been built from Britomart Point.

This was the state of the waterfront when the Harbour Board undertook the management of the Port.

The Board immediately proceeded with a scheme of harbour improvements. In 1874 authority was obtained to borrow the sum of £150,000 for the purpose of building Auckland Dock (now demolished), constructing the Railway Wharf and Breastwork, and making certain reclamations fronting the City. Later, Queen's Wharf (then a wooden structure) was widened and lengthened, and the reclamation of Freeman's Bay was undertaken.

In 1882 authority was obtained to borrow a further sum of £150,000, and the construction of Calliope Dock was begun. The dock was opened on 16th February, 1888, when H.M. ships *Calliope* and *Diamond* were docked together. The same year a larger scheme of harbour works was authorised, the sum of £500,000 being borrowed for the purpose of paying off existing loans, constructing additional wharves and sheds, purchasing a bucket dredger and making further reclamations.

In 1899 an agreement was completed between the Admiralty and the Board, whereby the latter agreed, in return for an annual subsidy, to provide workshops and machinery, together with a deep water



AUCKLAND, LOOKING EASTWARD
 Showing the wharves, Quay Street, and King's Drive (receding)



AUCKLAND: VIEW FROM THE WATER



FROM THE FERRY BUILDING.
 y reclaimed), Devonport and Rangitoto Island on the left.



THE NORTH SHORE.

jetty and 80-ton sheerlegs, so that Calliope Dock might be made efficient for the docking and repair of ships of the Royal Navy. Four years later this agreement was extended and the subsidy increased to cover the cost of additional works. This arrangement made Auckland the naval base for the Dominion.

The growing trade of the Port and the pressing need of accommodation for oversea vessels caused the Board to decide, in 1903, that the time had come to adopt a comprehensive scheme of harbour improvements. In July, 1904, the Engineer submitted a scheme of works, which, after consideration extending over some months, was adopted. A Bill was promoted and passed through Parliament, in 1905, authorising the borrowing of £400,000, in order to enable the Board to proceed with the first portion of the scheme. Contracts were let for the construction of the Railway Wharf in ferro-concrete: the reclamation at Freeman's Bay was undertaken: the deepening of the berths to take the largest vessels coming to New Zealand was begun: and landing stages for the vehicular cargo vessels were built. The same year a contract was let for the construction in reinforced concrete of the first portion of the new Queen's Wharf.

In 1907 the Railway Wharf was completed and brought into commission, and a contract was let for the construction upon it of five single-storey steel sheds. The Ferry Jetty was finished and brought into use, and the work of deepening the berths was advanced.



CHAIRMEN OF THE AUCKLAND HARBOUR BOARD.

First Row. — W. C. Daldy (1871-77); J. T. Boylan (1877-78); D. H. McKenzie (1879-80).
Second Row. — F. L. Compton (1881-82); G. Aickin (1882 and 1884); C. B. Stone (1883); G. W. Owen (1885).
Third Row. — W. R. Waddell (1886-88); M. Niccol (1888-91, 1895 and 1898); C. C. McMillan (1892); W. Crowther (1893); A. Porter (1894).
Fourth Row. — A. H. Nathan (1894 and 1902); W. J. Napier (1897 and 1899); A. Kidd (1901); W. Gunson (1902); J. T. Julian (1903-04).
Fifth Row. — Hon. (afterwards Sir) L. Mitchelson (1905-09); A. J. Entrican (1910-11); J. H. Gunson (1911-15); H. D. Heather (1915-1922).
 (Mr. G. S. Kissling and Mr. J. W. Witheford occupied the chair in 1896 and 1900, but no photographs of them are available.)

In 1908 the Board decided to obtain authority to borrow a further £1,000,000, and an empowering Bill was promoted and successfully passed through Parliament.

The following years were busy ones for the Board. Construction work was continued, but trade and shipping increased at a greater rate than provision could be made for them. Northern Wharf, for the accommodation of the fleet of coastal steamers, was completed; the reclamation of Freeman's Bay (67 acres) was finished; arrangements were made with the Auckland City Council for widening and improving the streets on the waterfront; and the reclamation of Mechanics Bay, to provide railway yards, was begun. The main harbour and its approaches were re-surveyed by arrangement with the Admiralty, and every effort was made to make the Harbour safe at all times by the provision of lights, buoys and beacons. The old wooden Queen's Wharf was replaced with a longer and wider structure of ferro-concrete, equipped with large transit sheds (three of them of two stories), electric cranes and capstans, railway sidings on the quay sides, and a centre roadway 60 feet wide. Central Wharf, similarly equipped, followed; the Western Breakwater and the first 1000 feet of Western Wharf, off the Freeman's Bay Reclamation, were completed. At the same time a slipway, or marine railway, capable of taking up vessels of 600 tons displacement, was built and commissioned, and other reclamations to the eastward of King's Wharf were undertaken.

In 1913 the Board took over from the Marine Department the control and management of Manukau Harbour. A scheme for a new ferro-concrete wharf, to replace the old wooden railway wharf, was approved, but could not be carried out owing to financial disorganisation consequent upon the Great War. However, the bar was re-surveyed, and new beacons and automatic lights were provided.

In 1919 Parliamentary authority was obtained for the borrowing of another million pounds for further harbour works. The work of replacing the old wooden Hobson Wharf with a new reinforced concrete structure, equipped with two-storey sheds and appliances for the rapid handling of cargo, was begun in 1921. The Eastern Tide Deflector was put in hand, and further reclamation work was undertaken. Meantime the Harbour had been deepened around the berths and in the approaches to the various wharves, giving a depth at the main wharves of 35 feet of water at low water spring tides. Quarries were opened at Rangitoto, from which the Board obtains the stone for its own works, and a sawmill was erected on the coast to provide timber.

As these improvements proceeded, trade and shipping increased. In 1871 the Board's net receipts were £6,523, whilst in 1921 (its jubilee year) they amounted to £283,782.

The arrivals of shipping at the Port of Auckland have increased in that time from 205 vessels, totalling

88,567 tons register, to 5,367 vessels, totalling 1,800,193 tons in 1921.

The berthing accommodation at the present time amounts to 14,925 feet, of which 8,208 feet is available for overseas shipping and 6,717 feet for coastal vessels.

From time to time the Board's constitution has been altered, until it now consists of 14 members, three of whom are elected by the electors of the City of Auckland, seven by the electors of the suburban districts and the ratepayers of the adjoining counties, three by the payers of dues, and one nominated by the Governor-in-Council. The Board has been fortunate in the men who, from time to time, have occupied the Chair. Mr. H. R. Mackenzie is the present Chairman.

The Board fully recognizes that its future is bound up with that of the City and Province, and that the Harbour must keep pace with their progress. This year (1922) it is estimated that over £400,000 will be spent on works for the improvement of the Harbour.

The following progress statement of receipts, commencing with 1872, will indicate the financial advancement made by the Board:—

Year.	£	s.	d.
1872	12,498	2	11
1881	25,525	17	2
1891	33,884	1	10
1901	54,286	10	4
1911	125,294	8	7
1921	283,782	9	2

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In Appendix C will be found a statement of the shipping of the Port from 1871 to 1921, in decennial periods.

Mr. J. M. Brigham succeeded Mr. Ogilvie as Secretary in 1872, and occupied that office until his decease in 1910. He was followed by the present holder of the position.

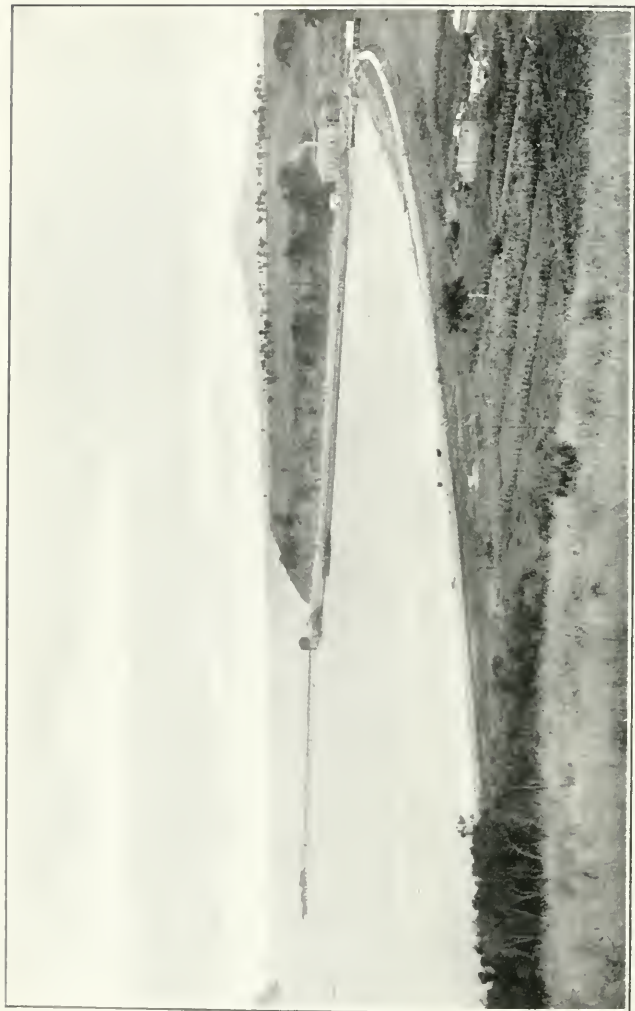
H. R. BURNETT,
Secretary and Treasurer.

AUCKLAND AND SUBURBAN DRAINAGE BOARD.

When the necessity for drainage facilities first presented itself to the inhabitants of Auckland and the suburban areas, it was, of course, impracticable to proceed with extensive works. The authorities concerned therefore adopted the simple method of constructing sewers alongside the natural watercourses with the outlets discharging into the harbour. These sewer outlets were increased in number from time to time with the growth of the City and expansion of its suburbs, until it became apparent that some improved method of sewage disposal should be adopted.

As early as 1878, Mr. W. Clark, M. Inst. C.E., of London, visited Auckland for the purpose of reporting on the main drainage of the City and certain suburbs. In his report to the City Council he recommended the construction of intercepting sewers, pumping stations, septic tanks and filters with an outfall in St. George's Bay and provision for an extension to Hobson Bay if occasion should require. No action was taken however with regard to these recommendations.

In 1902 Mr. A. A. Wrigg, City Engineer, was instructed by the City Council to report on the drainage of the City. He advised that the method, then existing, of discharging sewage from the many outlets into the harbour could be rendered quite sanitary by the extension of the sewers to low-water mark.



OKAHU BAY, SHOWING THE STORAGE TANKS.

The matter was again considered by the City Council in 1903, the Auckland Harbour Board having then decided that the discharge of crude sewage into the harbour must be discontinued. In this year Mr. R. L. Mestayer, M. Inst. C.E., of Wellington, visited Auckland and enquired into the drainage of the City. He afterwards reported to the City Council and recommended that the City be re-sewered on the separate system, and that a main intercepting sewer be constructed, with septic tanks and outlet at Cox's Creek.

After having considered Mr. Mestayer's report the City Council, under the Mayoralty of the Hon. E. Mitchelson, referred the whole question to Mr. G. Midgley Taylor, M. Inst. C.E., of London. In 1905 Mr. Taylor submitted his report, in which he recommended the utilization of the existing sewers as far as practicable and the construction of a main intercepting sewer with an outfall at Okahu Point.

In 1906 Mr. W. E. Bush, M. Inst. C.E., City Engineer, was instructed to report on the schemes proposed by Mr. R. L. Mestayer and Mr. G. Midgley Taylor. In his report to the Council Mr. Bush concurred with the proposals of Mr. Taylor, but recommended the adoption of a scheme which would provide for the drainage, not only of the City, but also of those suburban districts whose natural drainage was towards the Waitemata Harbour between Okahu Point and Motion's Creek.

This report was afterwards considered at several conferences of the authorities interested in the proposals contained therein. Mr. Bush was eventually instructed to prepare a scheme for the main drainage of Auckland and suburbs, the Auckland Harbour Board being at the same time requested to allow of the discharge of sewage at Okahu Point.

Subsequently Mr. G. Midgley Taylor was, by mutual agreement between the City Council and the Harbour Board, commissioned to proceed to Auckland and submit a further report. He visited Auckland in 1908 for this purpose, and his report on that occasion contained the following important recommendations, which became embodied in the scheme ultimately decided upon and authorised by Act of Parliament:—

- (a) Adoption of a joint scheme for Auckland City and suburbs
- (b) Drainage on the combined system.
- (c) Direct discharge of the sewage, after screening, into the sea at Okahu Point.
- (d) Adoption of the line of the main intercepting sewer recommended by the Board's Engineer, Mr. W. E. Bush.

At this juncture it was fully recognized that the scheme, if adopted, should be proceeded with under the control of a single authority. Proposals were therefore projected, and considered at some length, for the incorporation of a Greater Auckland Municipality to comprise at least those authorities concerned in the

main drainage scheme. This was not effected, however, and as an alternative the scheme was authorised by "The Auckland and Suburban Drainage Act, 1908," and the Auckland and Suburban Drainage Board was constituted thereby as from October 10th, 1908.

The Board consists of the Mayor and Councillors of the City of Auckland, and the respective Mayors and Chairmen of the other contributing authorities: the Mayor of the City of Auckland being chairman of the Board, *ex-officio*.

The first meeting of the Board was held on November 20th, 1908, and was presided over by Mr. (afterwards the Hon.) Arthur M. Myers.

On October 25th, 1909, the works in the scheme were formally inaugurated by Mr. C. D. Grey, then Chairman of the Board. Upon completion of the outfall works at Orakei the scheme was brought into operation, the official opening ceremony being performed at the works on March 25th, 1914, by Mr. (afterwards the Hon.) C. J. Parr, C.M.G., then Chairman of the Board.

The function of the Board is to provide all necessary facilities for the reception of sewage from the several districts incorporated within the Drainage District, and to make provision for the proper discharge of such sewage into the harbour at Okahu Point. Reticulation sewers are provided by the several local authorities, by-laws of the Board regulating their design and construction.

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The scheme has been designed for an area of 18,900 acres with an estimated ultimate population of 280,000 persons on a basis of 210 gallons per capita per diem, or six times a dry weather flow of 35 gallons.

At the inception of the Board twelve separate districts were incorporated in the Drainage District with a total area of 12,915 acres. Portion of another district, comprising 2,240 acres, was incorporated in 1915, making a total area of 15,155 acres. Seven of the original districts have since been amalgamated with Auckland City, and have consequently ceased to exist as separate districts under the jurisdiction of the Board. The areas of the several districts incorporated in the Drainage District as at March 31st, 1921, are as follows:—

District.	Acres.
Auckland City (including Domain)	1,878
Parnell, amalgamated Auckland City, Feb. 15, 1913...	684
Arch Hill, amalgamated Auckland City, April 1, 1913	154
Grey Lynn, amalgamated Auckland City, July 1, 1914	900
Remuera, amalgamated Auckland City, March 1, 1915	2,520
Eden Terrace, amalgamated Auck. City, Oct. 1, 1915	95
Epsom, amalgamated Auckland City, Feb. 1, 1917 ...	860
Pt. Chevalier, amalgamated Auck. City, Mar. 1, 1921	1,200
Total area Auckland City	8,291
Mount Eden	1,400
Mount Albert	2,150
Newmarket	169
One Tree Hill (portion)	605
Avondale (portion), incorporated Nov. 4, 1915	2,240
Total area Drainage District	15,155

The further area of 3,745 acres provided for comprises an additional area of the One Tree Hill Road District, the Orakei Road District, and a portion of the Mount Roskill Road District. Negotiations have been commenced for the inclusion of the first-mentioned

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area, but no proposals have yet been made with respect to the other two areas.

In the census returns for 1911 and 1921 the population of each of the several districts is given as follows:—

District.	Population.	
	1911.	1921.
Auckland City (including Domain) ...	67,832*	81,712
Mount Eden	9,381	11,635
Mount Albert	6,700	11,345
Newmarket	2,780	3,083
One Tree Hill (portion)	2,000	5,197
Avondale (portion)	†	3,229
	88,693	119,201

* These figures include districts since amalgamated with City.

† Not incorporated in Drainage District at this date.

The Board is empowered to borrow a total sum not exceeding £500,000 for expenditure on the works authorised. At March 31st, 1921, five separate loans had been effected amounting in all to £450,000. Two loans, amounting to £5,500, raised by the late Hobson Bay Watershed Sewage Board, are also liabilities of the Board, the public debt of which is therefore £455,500.

Repayment of loans is provided for by a sinking fund administered by the Auckland and Suburban Drainage Loan Commissioners. The accumulated amount in the fund at March 31st, 1921, was £25,436 15s.

The ordinary income and revenue of the Board is derived by assessments levied annually upon the contributing authorities. The fund thus created provides for the payment of interest and sinking funds on loans

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and for expenses incurred in general maintenance of completed works. An annual estimate of the amount required for these purposes is prepared, and each local authority is assessed for its proportion of this amount as the capital value of all the ratable property in its district bears to the total capital value of the Drainage District, these values being furnished by the Valuer-General. The following table shows particulars of these operations for the year ending March 31st, 1921 :—

District.	Capital Value*	Amount Assessed.
	£	£ s. d.
Auckland City	21,868,377	22,081 2 4
Mount Eden	2,302,815	2,325 4 3
Mount Albert	1,635,418	1,651 6 6
Newmarket	661,404	667 16 9
One Tree Hill (portion) ...	663,457†	669 18 2
Avondale (portion)	387,464†	391 4 8
Point Chevalier	242,150	244 10 1
	<u>£ 27,761,085</u>	<u>£ 28,031 2 9</u>

* As at March 31st., 1919.

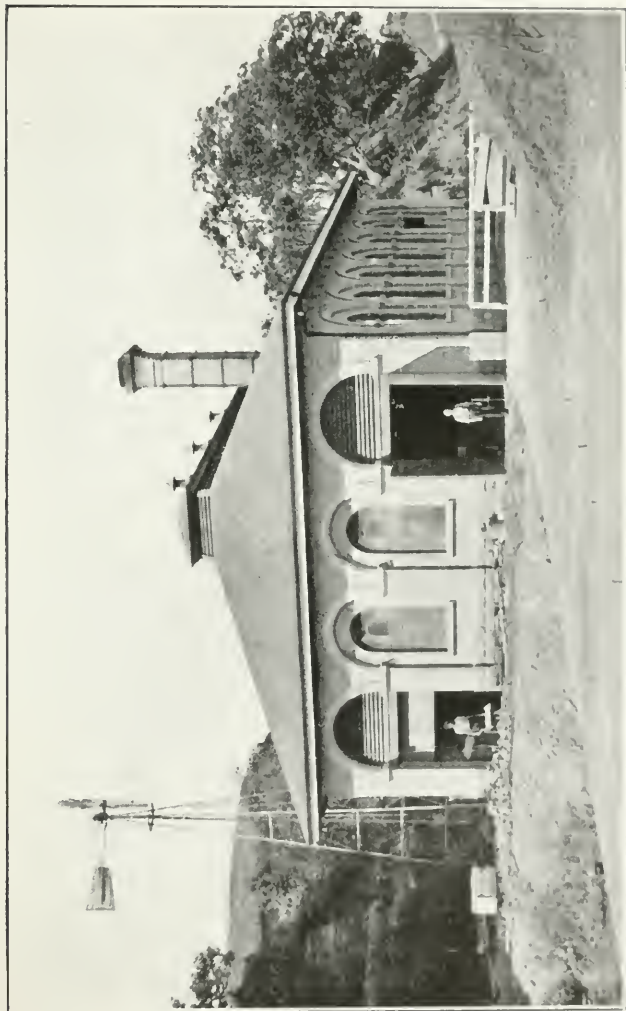
† For portion included in Drainage District.

‡ Amalgamated with Auckland City March 1, 1921.

The following principal works in the scheme were completed at March 31st, 1921 :—

- (a) Outfall works at Orakei, comprising outfall sewer, storage tanks, buildings and plant.
- (b) 7 sections of the main sewer of a total length of 8 miles 10.5 chains.
- (c) 13 branch sewers of a total length of 12 miles 73.2 chains.
- (d) 4 pumping stations.

The main outfall sewer is 1,213ft. long, with its point of discharge 875ft. north-east of the Orakei Jetty. For a length of 732ft. from the seaward end it consists of



MAIN BUILDING. IN WHICH SCREENING PLANT IS INSTALLED.

two 48in. diameter cast-iron pipes on cast-iron cradles, the next length of 324ft. consists of two similar pipes set in concrete, and the remaining portion is a concrete culvert 22.5 square feet in sectional area leading into the outfall chamber of the storage tanks. The invert of the outfall sewer at its point of discharge is 26.2ft. below high-water level.

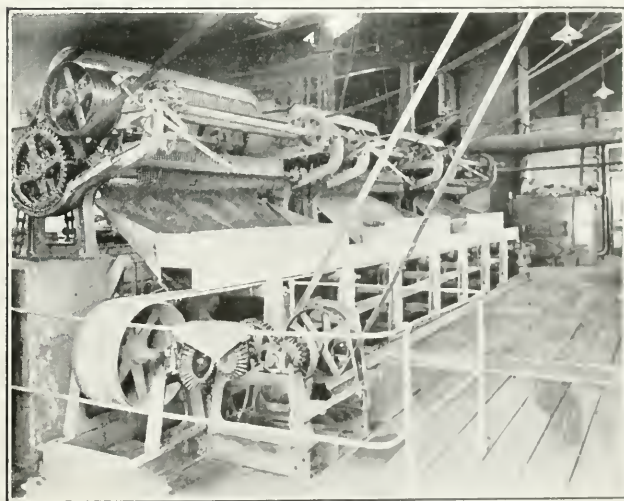
The storage tanks are comprised in one block 1,296ft. 6in. in length and 106ft. wide, with a total capacity of 7,800,000 gallons. They are constructed of concrete, plain and reinforced, the roof having been designed to form a portion of the suggested esplanade for the foreshore of the harbour.

At the inlet end of the tanks a brick building is erected in which is installed the screening and detritus-removal plant, comprising coarse screens, mechanically operated fine screens, and a bucket dredge. This plant is driven by a 10 b.h.p. vertical steam engine, with an oil engine as a stand-by. A valve chamber is built at the outlet end of the tanks, in which the valves controlling the discharge of sewage are operated.

The main intercepting sewer, which has a ruling gradient of 1 in 3,000, is of the standard oviform, or egg-shaped section, ranging from 8ft. 6in. by 5ft. 8in. to 3ft. 6in. by 2ft. 4in. It is constructed of concrete, plain and reinforced, and is laid principally in tunnel with the exception of a length of 100 chains in Hobson Bay, which is constructed on reinforced concrete piles. The branch sewers are of various sections and grades, and are constructed of concrete and earthenware pipes.



MECHANICAL SCREENS: FRONT.



MECHANICAL SCREENS: BACK.

Four pumping stations have been provided for the low-level areas and reclaimed lands on the foreshore of the City. The plant necessary for the total output at each station is installed in duplicate, each unit consisting of a stereophagus centrifugal pump, electric motor, patent automatic controller and float apparatus.

During the year ending March 31st, 1921, an average daily dry-weather flow of $6\frac{3}{4}$ million gallons was recorded at the Orakei works. The greatest quantity discharged in any one day was $57\frac{1}{2}$ million gallons, recorded on November 22nd, 1915.

The Board meets quarterly in the Council Chamber, Town Hall, Auckland. The successive Chairmen of the Board have been Mr. (afterwards the Hon.) A. M. Myers, 1908-1909; Mr. C. D. Grey, 1909-1910; Mr. L. J. Bagnall, 1910-1911; and Mr. (afterwards the Hon.) C. J. Parr, C.M.G., 1911-1915; the present Chairman being Mr. J. H. Gunson, C.M.G., who has held that office since April, 1915.

The office of the Board is in Cleave's Buildings, High Street, Auckland. Mr. W. E. Bush, M. Inst. C.E., City Engineer, who designed the scheme, was Engineer to the Board until September, 1915, and Mr. R. H. Irwin was Secretary to the Board until April, 1914. These officers were succeeded by the present holder of the joint position of Engineer and Secretary.

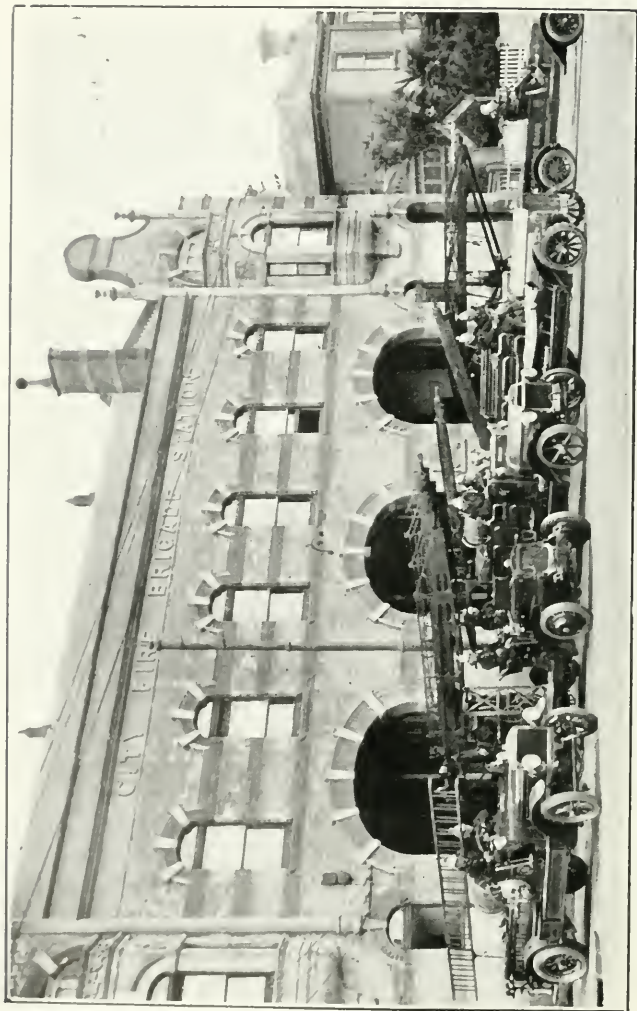
H. H. WATKINS, M.R. San. L.,
Engineer and Secretary.

AUCKLAND FIRE BOARD.

Auckland's early fire brigades were volunteer organisations. In the seventies, soon after the formation of the Auckland City Council, under the Municipal Corporations Act, the Fire Brigade became a department of the Corporation, and continued under the Council's control until 1907, when the Auckland Fire Board took over the brigade under the provisions of "The Fire Brigades Act, 1906." The Board, which consists of seven members, one appointed by the Governor, three elected by insurance companies, and three appointed by the City Council, held its first meeting on July 1st, 1907.

The plant at the time of the change of the control consisted of one small motor tender and four pair of horse machines. The Board decided to replace this out-of-date apparatus with modern fire fighting appliances, and immediately acquired a large Thornecroft motor tender, with a speed of forty miles per hour, and capable of carrying twelve men and the necessary first aid equipment. In 1909 a large 120-horse power Dennis Gwynne motor turbine pump, capable of throwing 800 gallons of water per minute, at 120lbs. pressure, was obtained. This was the largest motor pump in existence at that period for fire fighting purposes, and has not yet been superseded.

In 1912 the equipment of the Brigade was increased by a second Thornecroft tender and an electric turntable



CITY FIRE STATION.

extension ladder, capable of extending 87ft. without resting on any structure at the top. This meant withdrawing from service three pair of horses, only one pair being retained to draw the Shand Mason fire escape.

The new Board also increased the staff, which necessitated an enlargement of the Central Station, and a fine two storey brick building, with reinforced concrete floors was erected in Beresford Street, containing twelve rooms for single men on the ground floor and quarters for three married men on the first floor, and a flat roof for yard accommodation. The cost of this addition was about £6,000.

In 1913 began the first of a series of amalgamations with suburban districts, Arch Hill and Parnell joining the City. To meet the requirements of Parnell a new station, provided with a Kissel motor tender and a staff of three men, was opened in Manukau Road, near St. Stephen's Avenue. Electric fire alarms were installed, and to provide a sufficient water supply the district was reticulated with new mains, bringing it up to the City standard. At Arch Hill electric fire alarms were installed, and reticulation of water undertaken.

In the following year (1914) Grey Lynn amalgamated with the City, and additions were made to the existing station, a 35 h.p. Daimler motor was provided, and the staff increased to five. Electric alarms were also installed.

Remuera joined the City in 1915, and a new station was erected on Remuera Road, close to Victoria Avenue. The staff consists of six permanent men. The motor tender is a 40 h.p. Kissel. Electric alarms were also installed.

Eden Terrace also joined the City in this year, but owing to its proximity to the City station it was only necessary to instal electric fire alarms.

Epsom became part of the City in 1917, but as the stations at Parnell and Remuera were considered sufficient to deal with outbreaks of fire in these districts, all that was required to bring the district up-to-date was the installation of electric fire alarms.

Point Chevalier is the latest district to amalgamate with the City, and to meet the demands of residents in this locality the Board immediately acquired a site on which a station will be erected shortly.

A site has also been secured in Ponsonby Road, on which it is proposed to erect a station, to be known as the Western Station.

When the Fire Board first took over control of the Brigade it consisted of a central station, a station in Ponsonby, the Beach Road station, and a total staff of twenty-two permanent men and twenty-one auxiliary firemen under the command of Superintendent C. A. Woolley. Superintendent W. L. Wilson, who succeeded the late Mr. Woolley, now controls five stations and a staff of forty-two permanent men and twenty auxiliaries.

The fire alarm system has been thoroughly renewed under the present Superintendent by the installation of the Duplex fire alarm system, which is practically the last word in fire alarm installations. With its highly-trained staff and first-class appliances, Auckland can safely consider itself to be one of the best protected cities from the ravages of the fire fiend.

The annual cost of the Brigade in the year 1906 was £3,000, and for the year ending 30th June, 1921, it reached the sum of £17,000.

Mr. David Goldie was Chairman of the Board from its formation until 1917. He is still a member of the Board and one of the most regular attenders. Mr. H. P. Kissling succeeded Mr. Goldie, but resigned on being appointed General Manager of his Company. He was succeeded by the present occupier of the position, Mr. J. J. Kingston.

The following gentlemen constitute the present Board:—Messrs. David Goldie, appointed by the Governor; G. R. Hutchinson, J. W. Hardley, E. Davis, appointed by the Auckland City Council; J. J. Kingston, W. W. Saunders, W. Pavitt, elected by the insurance companies.

Mr. Percy Butler was the original Secretary, and the Board is fortunate in still having his services.

W. L. WILSON,
Superintendent

APPENDICES.

A.

**TABLE SHOWING, IN DECENNIAL PERIODS,
THE GROWTH OF THE CITY'S POPULATION.**

Year.	Population.		
1841	1,500 (estimated)
1861	7,989
1871	12,937
1881	16,664
1891	28,613
1901	34,213
1911	40,536
1921	81,712

The population of the City and Suburbs in 1921
was 157,757.

B.

**IMPORTS AND EXPORTS AT THE PORT OF
AUCKLAND.**

Year.	Imports.			Exports.		
	£	s.	d.	£	s.	d.
1853	..	253,926	12 8	148,724	19	0
1861	..	591,468	0 0	57,673	0	0
1871	..	937,655	0 0	1,601,763	0	0
1881	..	1,490,124	0 0	813,113	0	0
1891	..	1,595,036	0 0	1,218,321	0	0
1901	..	3,023,566	0 0	1,922,792	0	0
1911	..	5,650,734	0 0	3,280,878	0	0
1920	..	18,732,082	0 0	9,383,603	0	0

C.

SHIPPING OF THE PORT OF AUCKLAND.

INWARD.

Year.	No. of Vessels.	Tonnage	Net.
1871	.. 205	88,567	(Overseas only)
1881	.. 218	127,767	..
1891	.. 4,538	564,734	(Overseas & Coastal)
1901	.. 6,324	1,135,998	..
1911	.. 7,763	1,838,521	..
1921	.. 5,367	1,800,193	..

OUTWARD.

Year.	No. of Vessels.	Tonnage	Net.
1871	.. 212	90,159	(Overseas only)
1881	.. 209	111,119	..
1891	.. 4,165	543,226	(Overseas & Coastal)
1901	.. 6,304	1,097,729	..
1911	.. 7,826	1,835,936	..
1921	.. 5,301	1,750,844	..

D.

SHIPPING COMPANIES AND AGENTS.

With Offices in the City.

Aberdeen Line—Agents: Messrs. Dalgely & Co., and L. D. Nathan & Co.

American and Australian Steamship Line—Agents: New Zealand Shipping Company, Ltd.

Anchor Shipping and Foundry Co., Ltd., Nelson—Agents: Messrs. Russell & Somers.

Blackball Coal Co., Ltd.—Local Manager: T. N. Grange.

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British Imperial Oil Co.—Agents: Messrs. Gollin & Co.

British India Steam Navigation Co.—Agents: Union S.S. Co.
and N.Z. Shipping Co.

Burns, Philp Line.

Canadian and Australian R.M. Line—Agents: Union S.S. Co.

Canadian Government Merchant Marine.

Commonwealth and Dominion Line—Agents: Messrs.
Heather, Robertson, Ltd., and Farmers' Co-operative
Auctioneering Co., Ltd.

Compagnie Francais des Phosphates De L'Oceanie—
Agents: Messrs. Henderson & Macfarlane.

Craig Line of Steamers—Agents: Messrs. J. J. Craig, Ltd.

Cunard Line (Australasian Service)—Agents: Messrs.
Heather, Robertson, Ltd., and Farmers' Co-operative
Auctioneering Co., Ltd.

East Coast Shipping Company—Agents: Messrs. Walkin &
Wallis.

Eastern and Australian Line—Agents: Messrs. Russell &
Somers.

Federal Steam Navigation Company—Agents: N.Z. Shipping
Co.

General Steamship Corporation of San Francisco—Agents:
Messrs. Spedding, Limited.

Holt's Blue Funnel Line—Agents: Messrs. Henderson &
Macfarlane.

Huddart-Parker Line.

Kaipara Steamship Company—Agents: Northern Steamship
Company.

Messageries Maritimes—Agents: Messrs. Henderson & Mac-
farlane.

New Zealand Shipping Company.

N.Y.K. Nippon Yusen Kaisha—Agents: Messrs. Burns,
Philp and Co.

Northern Steamship Company.

Oceanic Steamship Company—Agents: Messrs. Russell &
Somers.

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Orient Company—Agents: Union S.S. Co.

P. and O. Branch Service—Agents: Messrs. Henderson & Macfarlane.

P. and O. Steam Navigation Company—Agents: Messrs. Russell & Somers.

Plako Steamship Company—Agents: Messrs. Watkin & Wallis.

Richardson Steamship Company—Agents: Messrs. Watkin & Wallis.

Riverhead Steamship Company—Agents: Messrs. Bradney & Binns.

Royal Dutch Packet Line—Agents: Messrs. Russell & Somers.

Shaw, Savill and Albion Co., Ltd.—Agents: Messrs. L. D. Nathan & Co., Ltd., A. S. Paterson & Co., Ltd, and Dalgely & Co. Ltd.

Union Steamship Company.

United States and Australasian Line—Agents: Messrs. Dalgely & Co.

Vacuum Oil Co. Proprietary, Ltd.

Waikato Shipping Company.

White Star Line—Agents: Messrs. L. D. Nathan & Co., and Dalgely & Co.

Yamashita Kisen Kaisha—Agents: Messrs. Heather, Robertson, Ltd.

Messrs. Thomas Cook & Sons have offices in Auckland, and are Agents for all Passenger Lines.

E.

CONSULS AND CONSULAR AGENTS IN
AUCKLAND.

- Belgium.**—A. M. Ferguson, Consul, c/o Messrs. John Burns & Co., Ltd., Customs Street East.
- Canada.**—W. A. Beddoe, Trade Commissioner, Union Buildings, Customs Street East.
- Chile.**—E. A. Craig, Consul, 63, Queen Street.
- Denmark.**—R. Millar, Acting Vice-Consul, 18, Commerce Street.
- France.**—E. T. de Beauregard, Consul for N.Z., N.Z. Insurance Buildings.
- Italy.**—J. H. Pagni, Royal Consular Agent, 20, Strand Arcade, Queen Street.
- Japan.**—A. B. Robertson, Consul, c/o Messrs. Heather, Robertson, Fort Street.
- Mexico.**—J. W. Hall, Consul, Palmerston Buildings, Queen Street.
- Norway.**—R. Millar, Vice-Consul, Commerce Street.
- Peru.**—G. H. Baker, Consul, 17, Commerce Street.
- Portugal.**—D. L. Nathan, Consul, c/o Messrs. L. D. Nathan & Co., Ltd., Shortland Street.
- Russia.**—Vacant.
- Sweden.**—Charles L. Nathan, c/o Messrs. A. H. Nathan, Ltd., Customs Street East.
- Switzerland.**—Vacant.
- The Netherlands.**—M. Copeland, Vice-Consul, 25, Strand Arcade, Queen Street.
- United States of America.**—K. de G. MacVilly, Consul, L. A. Bachelder, Hon. Vice-Consul, Fort Street.

F.

CITY BANKS.

Auckland Savings Bank.—J. Muir Barr, Manager.

Bank of Australasia.—F. W. E. Bush, Manager.

Bank of New South Wales.—W. H. L. Galwey, Manager.

Bank of New Zealand.—A. R. W. P. Green, Manager.

Commercial Bank of Australia, Ltd.—C. E. Carr, Manager.

National Bank of New Zealand, Ltd.—H. W. Lawson,
Manager.

Union Bank of Australia, Ltd.—Frank Herbert, Manager.

G.

CHIEF TRADES CARRIED ON IN THE
AUCKLAND DISTRICT.

Agricultural Implement Manufacturing.	Box Making.
Artificial Manure Manufacturing.	Brass Founders and Copper Working.
Bakery and Confectionery.	Brick, Tile, and Drain Pipe Making.
Baking Powder Manufacturing.	Building.
Bed and Bedstead Manufacturing.	Butter and Cheese Making.
Bicycle Making.	Cabinet Making.
Biscuit Manufacturing.	Candle Making.
Book Binding.	Casein Making.
Boot Polish Manufacturing.	Carpentry and Joinery.
Boot and Shoe Manufacturing.	Chemical Manufacturing.
	Civil Engineering.
	Coach and Carriage Building.

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Coal Mining.	Oil Engineering.
Cordial and Aerated	Optical Lense Manufac-
Water Manufacturing.	turing.
Drug Manufacturing.	Painting.
Electric Light and Power	Pickle and Condiment
Distribution.	Manufacturing.
Electrical Engineering.	Paper Manufacturing.
Fellmongering.	Plastering.
Flour Milling.	Plumbing.
Foundry Working.	Printing.
Fruit Bottling.	Rope, Twine, and Sack
Galvanised Iron Working.	Manufacturing.
Gas Lighting and Manu-	Saddlery.
facturing.	Saw Milling.
Glue Manufacturing.	Ship Building.
Gold Mining.	Smithing.
Jam Making.	Soap Making.
Leadlight Working.	Stone Masonry.
Mechanical Engineering.	Stove Making.
Monumental Masonry.	Tanning.
Motor Car Engineering.	Timber Milling.
Munition Manufacturing.	Woollen Manufacturing.

H.

LIST OF RELIGIOUS DENOMINATIONS, WITH CHIEF OR MOTHER CHURCH
AND MINISTER.

Denomination.	Church.	Minister.
Church of England	St. Mary's pro- Cathedral, Parnell	Right Rev. Alfred W. Averill, D.D., Bishop; Ven. George Macmurray, M.A., Archdeacon; Rev. P. E. James, Vicar and Canon.
Presbyterian Church	St. Andrew's	Rev. J. L. Harvey, Minister; Rev. J. Ings, Modera- tor; Rev. R. Sommerville, Clerk to the Presbytery.
Roman Catholic	St. Patrick's Cathed- ral	Right Rev. Henry W. Gleary, D.D., Bishop; Right Rev. James M. Liston, D.D., Coadjutor-Bishop; Right Rev. Monsignor Mahoney, Vicar-General.
Methodist Church of New Zealand	Pill Street Metho- dist Church	Rev. P. N. Knight, B.A.; Rev. G. H. Laws, D.D., Chairman of the Auckland District.
Baptist Church of New Zealand	Tabernacle	Rev. J. W. Kemp.
Congregational Union	Beresford Street Congregational Church	Rev. Frederic Warner.
Salvation Army		Major D. A. Gunn, Divisional Commander.
Hebrew	Synagogue	Rev. S. A. Goldstein and Rev. S. N. Salas.

Denomination.	Church.	Minister.
Associated Churches of Christ	Church of Christ, Ponsonby Road.	Rev. Ralph Gebbie, M.A.
Churches of Christ	West Street, New- ton	George Aldridge, Evangelist.
Auckland Theosophi- cal Society	Society of Arts, Kilcherer Street	
Auckland Unitarian Church	Ponsonby Road	Rev. A. Thornhill, M.A.
Theosophical Society	Theosophical Hall, 351, Queen Street, St. Benedict's St.	J. R. Thomson, President. William Beattie, Priest in Charge.
Catholic Apostolic Church	Freemasons' Hall, Belgium Street.	H. G. Such, Secretary.
Christadelphians	Scotia Place, Upper Queen Street.	George S. Taylor, Mission President.
Church of Jesus Christ of Latter Day Saints (Mormon)		
Seventh Day Ad- ventists	Ponsonby	A. W. Cornack, Pastor.
Society of Friends	Mount Eden Road	Egerton Gill
Society of the New Church Sweden- borgian	Newton Road	Rev. R. J. Strong.
Plymouth Brethren	No Central Body	

I.

LIST OF THE PRINCIPAL BENEFACTORS OF
THE CITY.

1. Sir George Grey, who presented to the City, in August, 1882, his collection of books, works of art, and curios.
2. Edward Costley, who died on April 18th, 1883, bequeathed the sum of £84,700 in equal shares to the following institutions:—Institute and Museum, Public Library, Hospital, Orphan Home, Home for the Aged Poor, Sailors' Home, and Boys' Institute.
3. James Tammoek Mackelvie, who died 4th June, 1885, bequeathed his valuable art collection and a sum of money, in trust, to establish and maintain a Museum of Fine Art. He also presented a collection of art books to the Public Library.
4. Dr. J. E. Elam, who bequeathed a sum of £6,500 to establish a School of Art.
5. James Dilworth, who died on 23rd December, 1894, left estate valued at £100,000, to be applied to the maintenance and education of orphans or of children of persons of good character in straitened circumstances.
6. William Leys, who died 5th October, 1899, founded and endowed the Leys Institute as a Free Public Library and Institute. The building was erected and furnished with funds derived, in equal parts, from the endowment and a donation by Mr. Thomson W.

Leys, who also presented the Institute with a library, and subsequently erected a new building for the Lending Department. The gifts of Mr. T. W. Leys, LL.D., to the Institute represent over £8,000.

7. Mrs. Edmund A. Mackechnie, who died on November 7th, 1902, bequeathed, by direction of her deceased husband, a sum of £5,000, of which £2,500 was to be used in the erection of a gallery for the Society of Arts, £2,000 for the endowment of a library for the Auckland Institute and Museum, and £500 for the purchase of cases of animals for the latter.
8. William Arrowsmith, who died in 1902, bequeathed about £23,000, to be divided, in equal parts, between the Orphan Home and Mrs. Cowie's Women's Home.
9. William Mason, who died on September 27th, 1905, bequeathed a sum of £10,000 to the Institute for the Blind, £1,000 to the Leys Institute, and smaller sums to other local organisations.
10. Auckland Savings Bank contributed, in 1905, £10,000 towards the building fund of the Technical College, and recently £25,000 to War Memorial Museum.
11. Mr. and Mrs. W. H. Smith, who presented to the Hospital Board, in March, 1907, a property situated in Ellerslie, containing over three acres and a two-storey dwelling, for the purpose of founding a Convalescent Home for women and children.

12. Ellen Knox, who died on October 19th, 1908, bequeathed £70,000 to charities, including £20,000 for the erection of a building for the treatment of poor people suffering from incurable diseases.
13. John Mitchell McLachlan, who died in 1911, bequeathed Cornwallis Park (1927 acres) to the city.
14. Mr. Henry Brett, ex-Mayor, presented the Pipe Organ installed in the Town Hall. He has for many years been a patron of music, and has presented organs to the Blind Institute, etc.
15. Hon. A. M. Myers, an ex-Mayor of the City, presented, in 1911, the clock which was erected in the tower of the Town Hall. In 1915 he donated Myers Park (6 acres), and erected at his own cost a Kindergarten which bears his name.
16. Sir John Logan Campbell, who died on June 22nd, 1912, made several presentations, including Cornwall Park (230 acres), and the Kindergarten, the Creche, and Nursery which bear his name. In his will he bequeathed £76,000 to public institutions.
17. Mr. Henry Shaw, an ex-City Councillor, presented to the Public Library, in 1912, a valuable collection of books and manuscripts, to the Art Gallery a number of pictures, and to the Auckland Museum a collection of Japanese art objects.
18. Mr. H. E. Partridge presented to the Art Gallery, in 1915, the Lindauer Collection of Maori paintings.

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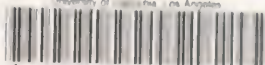
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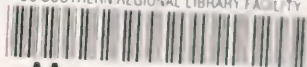
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